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CONTENTS

Objectives in the Teaching of Preventive Medicine and Public Health. Edited by <i>Leland W. Parr</i>	281
Some Remarks on the Teaching of Anatomy. <i>A. M. Lassek</i>	293
The Functioning of a Department of Oncology. <i>Stanley P. Reimann</i>	298
The Teaching of Stomatology to Medical Students. <i>Maury Massler</i>	304
The Teaching of Contraceptive Measures in Medical Colleges. <i>J. H. J. Upham</i>	307
High on a Watchtower. <i>Wade W. Oliver</i>	313
The Permanent Values in Medicine. <i>David John Davis</i>	318
Tentative Program for the Fifty-fourth Annual Meeting.....	324
Opening Dates of 1943 and 1944 Sessions of the Medical Colleges of the United States.....	326
Editorials	329
College News	331
General News	339
Book News	342

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Continued on Third Cover Page

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Objectives in the Teaching of Preventive Medicine and
Public Health*

I. INTRODUCTION

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What is public health? What is preventive medicine? We can be excused if we are uncertain as to what we shall teach. There can be no censure if there is no agreement as to how the material shall be taught. But we should at least know what we are teaching and for what purpose. Let us analyze our position briefly:

Our first premise is that 90 per cent of medical students become practitioners of medicine.

Our second premise is that we are not teaching preventive medicine and public health in order to prepare students to become Grade B health officers.

Our third premise is that we are preparing medical students to meet their obligations as private practitioners of medicine.

What is public health? Public health encompasses those activities that are undertaken for the prevention of disease and the promotion of health *that are a community-wide responsibility*. These activities are carried out by the Department of Health, by voluntary agencies, by the Department of Agriculture, Department of Education, and by State and County Medical Societies and many other community agencies. *But not by the practitioner of medicine.*

He should know about them and participate in them as does any good citizen, but these activities are not his direct responsibility.

What is preventive medicine? It comprises those activities that are the direct responsibility of the individual in the prevention of disease, and in the promotion of the health of himself and his family. Who is responsible for the proper execution of these activities? The person who is most responsible is the private practitioner of medicine, who serves as health adviser to each family in the community. Public health, then, is a community responsibility, requiring community wide effort. Preventive medicine is an individual responsibility to secure family benefits.

You may say that I am splitting hairs, for the objective in each of these efforts is the same. There should be joint action and joint responsibility: any

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activity that is undertaken for the promotion of the health of the mass will protect its component parts, and vice versa, any activity that promotes individual health will benefit the community. This point is readily granted.

But we must realize and re-emphasize the fact that the foundations of democracy are based on the principle that the individual is responsible for the protection and the welfare of his family. The initiative rests with him. It is not the primary responsibility of the community. He employs a physician to aid him in carrying out this responsibility. It is the physician's duty to prepare himself to meet this obligation.

I again insist that the terms public health and preventive medicine are not interchangeable, because of the fact that the responsibility for and the execution of these activities are on different bases.

Since it is the responsibility of the practicing physician to practice preventive medicine, rather than public health, and since 90 per cent of our medical students will become medical practitioners, why not place our teaching emphasis accordingly?

I wish to suggest :

1. That we teach each student the broad, general principles of public health and their methods of execution. He should know them, and participate in them in his community.
2. We should place special emphasis on his training in preventive medicine, and coordinate this training with the teaching in clinical medicine. The young physician will thus be prepared to meet his special obligations in this field when he assumes them.

II. MAJOR OBJECTIVES OF A COURSE IN PUBLIC HEALTH FOR MEDICAL STUDENTS

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Instead of discussing "major" objectives, which might lead quickly into a field of controversy, it seems more profitable to consider "minimum" objectives.

The minimum objectives of such a course as is given to medical students are those which will fit the student for those relations to the field of public health which are essential in his role as a practicing physician. This role is defined to some extent by legal and also by social requirements.

I. PUBLIC HEALTH RESPONSIBILITIES IMPOSED BY LAW ON PRACTICING PHYSICIANS.

- (a) Preparation of certain important documents of a legal nature.
 1. Birth certificates.
 2. Death certificates.
 3. Stillbirth certificates.
 4. Premarital certificates.

- (b) Reporting of certain diseases.
As specified in the codes of the various states.
- (c) Collection of certain information.
Information of an epidemiologic nature may be required, such as the names of sources and contacts in venereal diseases.
- (d) Administration of certain types of treatment.
An example would be prophylactic treatment administered to the eyes of newborn babes.
- (e) Carrying out of certain tests.
Serologic tests on prenatal cases and on applicants for premarital certificates would be examples. Legal or semilegal local rules may require for certain groups Schick tests and tuberculin tests and X Rays. In the release of cases of diphtheria and typhoid, release cultures are required.
- (f) Carrying out certain immunizations.
Usually of restricted application are requirements for immunization against small pox and diphtheria.

II. PUBLIC HEALTH WORK OF A SOCIAL NATURE WHICH AFFECTS THE ROLE OF THE PRACTICING PHYSICIAN.

- (a) Clinics for sick people.
Venereal disease, tuberculosis, crippled children, dental disease.
- (b) Clinics for well people.
Well baby clinics, routine health examination programs, routine immunization program.
- (c) Maternity clinics.
- (d) Relief agency health programs.
- (e) Visiting nurse work.

It is impossible to practice medicine satisfactorily in any community without some understanding of these and other official and non-official types of public health work which the physician encounters on every hand.

The least we can do in our courses is to ensure that the students have a sufficient understanding of the broad field of public health to be able to carry out intelligently the responsibilities now imposed on physicians by law or by social developments, and those which we may reasonably expect will be added in the not too distant future. Such an understanding requires acquaintance with the scheme of local and state health administration, the basic principles of clinical epidemiology and with preventive techniques applicable to the patient.

In addition, the medical student should know at least as much as do his intelligent clients about the public health measures which are actualities or possibilities within his community, and which are designed to adjust the environment in the direction of safety. He need not be an authority on details but he should be intelligent about the health implications of environmental hygiene.

It is important that we instill into their thinking the epidemiologic approach to the study of disease. By this I mean not so much an appreciation of the mass

implications of epidemiology as the individual or clinical aspects thereof. In this connection I feel that there should enter the social as well as the microbic aspects of disease. Epidemiologists, as a rule, have excluded from their thinking the fact that the patient is a person. We need, too, to develop in medical students the concept of health in positive rather than negative terms. We should give them a vision of the breadth of the field of public health.

In so doing, however, we should proceed with considerable caution. Public health is a specialty and only the foundation work of a specialty has any rightful place in the undergraduate medical curriculum. We must avoid all thought of using these courses to provide future health officers.

Nevertheless, I know that we can do a great deal toward attaining the minimum objectives which have been mentioned, and toward developing in the students a breadth of vision which will make them better physicians whatever be their field of specialization.

III. BIOSTATISTICS. WHAT, WHERE, HOW AND BY WHOM?

HENRY E. MELENEY

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The Department of Preventive Medicine and Public Health of the medical school should have the responsibility of teaching this subject. I prefer to term it "medical statistics," in order to give the students an assurance that it is a part of medicine.

The instructor in charge of the course should preferably be a Doctor of Medicine with training in public health statistics. The first essential, however, is that he be trained in public health statistics. He should have a working connection with other departments of the medical school, both preclinical and clinical, in order to integrate his subject matter with the medical curriculum. He should also be the statistical consultant for the entire medical school. If there is a hospital intimately associated with the medical school, he should be a consultant on hospital records.

The objectives of the course in medical statistics should be:

1. To impress on the students that much of our medical knowledge is based upon quantitative observations, in the laboratory, in the clinic and in population groups.
2. To create in the students a critical attitude toward the validity of conclusions reached in medical publications, in experiments which they perform, and in papers which they themselves may write.
3. To familiarize the students with methods of collection and use of birth, death and morbidity statistics, and with the physician's responsibility in this program.

A course in medical statistics can be given in 30 hours, one-third of the time devoted to lectures and two-thirds to laboratory exercises. The laboratory work

should consist of the solution of problems taken from medical literature, from statistical reports of public health agencies and from laboratory experiments performed in preclinical and clinical courses. There should also be exercises on the proper completion of birth and death certificates and morbidity report cards.

I believe that the most favorable place in the curriculum for such a course is at the beginning of the second year or in the latter half of the first year. This would come after the student has acquired a medical vocabulary and has become oriented toward medicine; but before he has become absorbed in purely clinical interests. He would at the same time be taking courses such as physiology, chemistry and pharmacology in which quantitative data are being employed.

IV. COMMUNICABLE DISEASE CONTROL

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Instruction of medical students in measures for the control of communicable disease has two fundamental objectives. The first of these is to impart that knowledge which is essential to the practitioner in the preventive care of his patients. The second aim is to give the practitioner sufficient understanding of community measures that he will be able and eager to cooperate with the official health agencies in the conduct of their programs.

While these two aims have a common ultimate objective, namely, reduction in the incidence of communicable diseases, nevertheless, they constitute two very different problems from the pedagogical point of view. Instruction in the practice of preventive medicine is designed to acquaint the practitioner with rather detailed procedures which he will be expected to perform. The physician must understand the epidemiology of the diseases as they affect the individual with special attention to the modes of acquiring and transmitting infection. Similarly, he should be instructed in the details of measures that protect the individual. All of this knowledge he must possess if he is to render efficient care to his patients.

Equally detailed knowledge of public health procedure is probably not essential to the average practitioner. Public health is as much a specialty as is ophthalmology or dermatology, and knowledge of its principles and procedures requires special training beyond the scope of the average medical curriculum. It is more essential that the medical student be instructed in the epidemiology of these diseases as they occur in the mass than in the details of community control. It is essential, however, that he be sufficiently introduced to the community aspects that he can appreciate the fact that the methods of individual preventive medicine will differ from those of community public health and that measures applicable to the individual are not necessarily effective when used on a community basis.

In determining the extent to which the student should be introduced to the community aspects of the disease we must remember, however, that in his later professional life the average student will have two possible needs for this infor-

mation. As a practitioner he must understand enough of these measures to be able to support and cooperate with the health department—and support means sympathetic cooperation, not merely refraining from opposition. He will have to interpret many community measures to patients and can in this relationship help to shape public opinion. In the second place, he may ultimately, regardless of his current interest and intentions, find himself responsible for safeguarding the health of his community as a part time health officer, as a member of a board of health, or as a school physician. Unless he has some slight understanding of the community aspects of the occurrence and control of the communicable diseases he can hardly be expected to perform his duties efficiently or to utilize fully the services of those cooperating agencies that employ full time trained personnel. Many of the shortcomings of the part time health officer have arisen from his failure to understand community measures or the need for seeking assistance in their performance.

In the actual presentation of any phase of the medical curriculum there is the inevitable temptation to expect the student to become familiar with too great a mass of detail, a mass so great that he can be excused for failure to see the forest because of the maze of trees. The teaching of communicable disease control is no exception to the foregoing generality. There is too often a tendency to consider too many diseases in too great detail with resultant confusion on the part of the student. It seems to me far better that we should concentrate rather on fundamental epidemiology and control principles, erecting for the student a framework on which he can subsequently hang his detailed knowledge. The student who possesses such a frame-work of orderly thinking can grasp and arrange the details far better than can the student who has approached each disease as a problem distinct from any other disease. Wherever we must curtail our instruction—and there is never adequate time allowed—this curtailment should be at the expense of detail rather than of principle.

Similarly there is a grave temptation to consider too many diseases. Interesting as these are, time is lacking for their adequate consideration. To attempt it means the inevitable slighting of all. In my opinion, it is better to select a few typical diseases which should be discussed rather thoroughly, followed by such cursory attention to allied diseases as will call attention to the methods in which they differ from the prototype selected. Thus, typhoid may be selected as an example of the intestinal diseases and discussed with some care, the discussion of paratyphoid, cholera and the dysenteries being confined to the aspects in which they differ from typhoid. This should serve to assist the student in his thinking rather than to confuse him.

Finally, mention should be made of the need for coordinating the instruction regarding communicable disease control with the clinical instruction in these diseases. Too many of us—and I include myself in this group—have tended to present the preventive aspects as a subject entirely apart from the clinical, as though the practitioner could separate this aspect in his private practice. I feel confident that the next few years will see an expansion of those measures developed so effectively at Vanderbilt for the integration of preventive with clinical medicine.

V. ENVIRONMENTAL SANITATION

A. P. HITCHENS

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In the public health and preventive medicine curriculum that section which is called "Environmental Sanitation" deals mainly with those services which depend upon community effort. The motivating impulse which secures popular support for such services results from an inculcated belief that their efficient application will make the community a healthful and pleasant place in which to live. The services themselves are such as have to do with: An ample supply of clear, soft, potable water; the inoffensive disposal of sewage and other wastes; supervision over the quality of milk and other foods—including production, preservation and distribution; the abatement of nuisances, on the ground as well as in the air; supervision of lighting and ventilation in public buildings, including the disinfection of the atmosphere by ultraviolet light, or by other means; the supervision of housing and plumbing, and the destruction of rats and other vermin and of the insect vectors of disease.

From the strictly medical point of view, the aim of environmental sanitation is the prevention of communicable disease by interrupting the transfer of agents of infection—from wherever they may be in the environment—to the human host. The achievement of such an aim may require the concerted activities of highly trained specialists and the expenditure of large sums of money. To the physician belongs ideally the role of initiating the movements in his community which will result in the maintenance of completely adequate engineering installations and the employment of trained and alert personnel to manage them.

While the physician need not himself be skilled in all the technical work of the environmental sanitation program, it is essential that he have broad and accurate knowledge of its principles. The fundamentals of such knowledge, and an abiding concern for them, should be acquired not later than the undergraduate years in medical school. In the teaching of these fundamentals, emphasis will rest on four points:

1. The first is the aim to make the freshman conscious—rarely more conscious—of the relationship between his own health and that of his new environment as a medical student. Early in his course, when he is keenly receptive to anything that will seem like a medical fact, he will readily agree that among the duties of a useful citizen are those of intelligent cooperation with the constituted health authorities, of gaining an understanding of their efforts and of refusing to condone infractions of the sanitary code that may endanger his own health and that of his classmates.
2. The second includes the technical and practical knowledge he should acquire for use in his professional work after graduation. The chances are that he will be a clinician; the certainty is that he will be an epidemiologist. As a

doctor he should have intimate knowledge of the sanitary installations of his community, and, therefore, understanding of their relative adequacy. He should be well enough acquainted with the work of his health department to suspect the most likely sources of infection among his patients and be able to discuss with officials in charge the actual need for prompt and vigorous measures to correct possible faults.

3. The third point to be emphasized is that as a medical student his training is fitting him to be a leader. For he will be a leader in spite of any violent decision he has recently made to be nothing of the kind. Although the average physician is willing to turn over to the health officer and to the sanitary engineers and the chiefs of bureaus, all matters that concern the sanitation of the environment, he knows that these officials will, and can, continue to do their work well only so long as they have the intelligent support of the medical profession. Their work will be done at its best only when the doctors are critical and intelligently discriminating. The greatest emphasis of this course should be placed on the need for enough technical knowledge among graduates to give them justifiable confidence in their ability to discriminate. We need doctors with enough technical knowledge, confidence and ability to cause them to act promptly and wisely when their community needs professional leadership.

It is my belief that the state of sanitation in any city—in any community—is directly dependent on the effectiveness of the training in this field given by the medical schools where its doctors were educated.

4. The fourth point concerns health education. Large sums of money are appropriated for water works, for sewerage, sewage disposal plants, incinerators and for the salaries of engineers and sanitary inspectors, only when necessary expenditures are demanded by an intelligent electorate. The course in Environmental Sanitation must give the future doctor historic data which will arouse in him an abiding interest and curiosity. When the time comes he will use the definite facts and figures and reference sources given him as a student, and those later acquired for himself, to assist his health officer in the education of the people to the end that the needed appropriations shall be made.

Environmental sanitation is historic—it is equally current and it has a productive and compelling future. It cannot be left completely to the engineer however efficient that officer may be. The health of the people is pre-eminently a concern of the doctor. He must be well instructed fundamentally and thereby stimulated to investigate for himself in order that he may give sound advice from his own store of first hand knowledge. He should aim to build up and maintain a reputation for being a reliable source of information upon everything that concerns the public health.

METHOD OF PRESENTATION: We must still depend on didactic teaching. Lectures will be well interspersed with attractive lantern slides; these should be selected carefully and tell valuable facts; a darkened room facilitates somnolence. Sound motion pictures are available, some of which are excellent. These will be useful only if it is certain that they will hold the interest of the class and tell

the story more effectively than can be done without this modern aid. So many of the great sanitary installations, e. g., water works and sewage disposal plants are closed to us now, motion pictures must be used to a large extent as substitutes for inspection trips.

Certain factories, those not doing war work, are glad to welcome students as a part of their advertising campaign. Housing tours, well conducted, are exceedingly valuable and are available in all our cities. There is always interest in restaurant sanitation and students like to visit dairy farms and pasteurizing plants. Every tour of inspection should be organized and discussed beforehand. For certain visits mimeographed scoring blanks may be made up and distributed to be filled out and turned in later. The volume on "Recording of Local Health Work," by Walker and Randolph (Commonwealth Fund, New York, 1936), gives adequate help in preparing these blanks.

Carefully mimeographed course outlines are furnished to each student as the term progresses. Printed matter from government and other sources is distributed but no such material is given out unless it is pertinent and definitely supplements information contained in recommended texts.

INTEGRATION WITH OTHER COURSES: At our school the amount of time allotted to public health subjects was nearly doubled in 1941-1942. In the early part of the freshman year four hours are now available which are used to introduce the students to their environment. The lectures are not formal, but rather personal and conversational. The attempt is made to define public health and preventive medicine and to elicit a lively interest on the part of the students in the maintenance of their own health at a high level.

The course in environmental sanitation is given during the second semester of the sophomore year, immediately subsequent to the formal (first semester) course in bacteriology and immunology.

The class has just completed its painstaking study of the agents of disease, their biological characteristics, the mechanics of their transmission and the dynamics of the host-parasite relationship. It is a natural extension of that course to have it followed by a discussion of the administrative, engineering, inspectorial and police functions which aim to prevent the transmission of the agents of disease by and through the environment. The groundwork is thus laid for the quasi-clinical course of the junior year which is administrative and epidemiological and in which preventive and control techniques are emphasized.

VI. TEACHING PREVENTIVE MEDICINE THROUGH INDUSTRIAL MEDICINE

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To me, the most important function of the physician is to keep his patients well. If this concept is true, then more must be done to demonstrate to medical

students that this can be done. In our medical schools at the present time the departments of pediatrics do a pretty good job in teaching the health care of infants and children. The departments of obstetrics are also teaching the students to watch for little signs of coming trouble in the expectant mothers under their care. Outside of these two branches of clinical medicine practically all the emphasis in modern medical schools is on pathological findings, how to diagnose these conditions and how to treat them. Little, indeed, is being done to teach them how to keep the average adult well.

Four years ago, while attending a meeting of governmental industrial physicians and hygienists, I came to realize that these people were talking in the same terms for the keeping of individuals well that I had tried, with very poor success, over the last ten years to impress on the medical students whom I taught. To these men, industrial medicine was adult health. Returning from that meeting, I began to look around to see what the industrial physician in our area was doing in carrying out this modern concept of industrial medicine.

The first industrial medical department I visited was one conducted by a former student of mine. He, with four full time physicians, eight nurses, one technician and several clerical assistants, was carrying out this idea with a degree of success I was not expecting in a plant population of 3,500 men and women. I visited the national headquarters of this organization and found that the whole medical program was set up on the basis that the function of the industrial physician was to keep his men well and working. Treatment of ills that the company was not responsible for was left to the family physician. The industrial physician did everything in his power through preplacement physical examination, periodic examinations and frequent personal conferences with the individual worker to keep him well. To do this, he had to know the working conditions in every area of the plant and the chemicals coming into and going out from the plant. He cannot properly place men and women at work if he does not know these things. To do this, he must work in close cooperation with the organization's industrial engineers, the plant foremen and the safety personnel.

We proceeded at once to get permission to take our senior medical students, in sections of eight, into the plants and medical departments of this company and to the Compensation Commission of the State and the Bureau of Industrial Hygiene of the State Health Department. In the medical department, the students could see at first hand just how an industrial medical practice is carried on. Industrial management was sold on the program on the basis that their compensation work would be much simplified if the practicing physicians of the area about their plants would understand just what the medical and health problems in industry were and that knowing these, the physicians would do a much better job in cooperating with the industrial physician. The Compensation Commission and Bureau of Industrial Hygiene of the State Health Department are always glad to have the practicing physician better understand what they are doing and can do for them.

Preventive medicine cannot compete with medicine and surgery in the other departments in a medical school with a series of didactic lectures when the other departments have clinical material with which to teach. If the modern concept of industrial medicine is to be developed in the men and women now graduating from medical schools, it is necessary that this type of clinical practice be taught. Since more than 50,000,000 people—more than one-half of the adult population—are now gainfully employed, it certainly makes a field that deserves the utmost attention of medical educators. It is estimated that 85 per cent of all practicing physicians have some contact with industrial practice. This means that every medical student must have this phase of medicine taught to him if the care of the industrial population is to be what it should be. If, by a series of health examinations, at frequent intervals, industrial tumors can be eliminated from a group of workers; if, by a series of health examinations, other causes of death and disability can be reduced markedly or eliminated entirely in a working population, there is certainly much to be said for this program. One industrial medical group, analyzing their absentee figures, found that 15 per cent of their working population produced more than 50 per cent of absenteeism. By personal conferences and repeated examinations of those suspected of having trouble, in two years' time the work record of this 15 per cent was as good as or better than the other 85 per cent of the workers in the plant.

Management in all industries is not equally cooperative nor are all medical schools favorably situated as regards Compensation Commissions and Bureaus of Industrial Hygiene but much can be achieved by any teacher of this subject who will interest himself and spend some heart upon it. Certainly a specialty in which 85 per cent of all medical practitioners have at least some practice, deserves considerable time from medical educators.

VII. THE INFLUENCE OF SOCIAL AND ECONOMIC FACTORS UPON ILLNESS AND ITS PREVENTION: EMPHASIS, MODE OF PRESENTATION AND INTEGRATION

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The influence of social and economic factors on illness and its prevention is a subject of great interest and complexity. It can hardly be discussed adequately in brief compass but one may make a few observations on this topic as it concerns itself with medical education.

The medical student of today meets his patients either in hospital or in the outpatient clinic. The history is taken, an examination is made and treatment given. The student follows the case for a week or so and the patient leaves the hospital. In most cases, whether the patient comes to the clinic or the hospital, the student sees him for only a brief interval. He knows nothing whatsoever of the patient's home, the environment in which he lives, whether or not he is earn-

ing enough to provide for himself and his family, and many other factors which have such a direct influence on health. The student's conception of the patient is too restricted—it is not a human attitude. For the past twenty years we have been trying to correct this by sending the student into the homes of a few of the patients he sees in the outpatient clinic. One of the public health nurses attached to the Department of Preventive Medicine supervises the work. Each student is required to visit the homes of three patients. He is given a form on which the observations he is required to make are listed; such things as the nature of the district in which the patient lives, the type of dwelling, heating facilities, the number of rooms, the number in the family, the health of the several members of the family and the earning capacity of the family. He is asked to suggest remedies for the conditions he finds and to give his impressions of the influence of the environment and home conditions on the case he is studying.

Our system is by no means ideal. We do not, at all times, have sufficient cases to fit into the scheme. Some of the students' reports are dull and uninteresting and seem to have been carried out because it was required of them. On the other hand, many of the reports are excellent. They give a complete picture of the patient's social and economic status and point out the futility of too much dependance on drugs to effect a cure, without a recognition of the underlying factors of poverty, ignorance, poor housing, and improper food. One thing we are sure of and that is to a limited extent we are endeavoring to show one-half of the world how the other half lives.

Some Remarks on the Teaching of Anatomy

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For many years criticism has been directed by many writers against the methods employed in the teaching of anatomy. Among the objections raised are the following:

1. Anatomy is hidebound by tradition.
2. It is a parrot subject concerned with memorizing a large number of unessential and detailed facts.
3. Dissection of the human body is not a good starting point for the medical student and the anatomical knowledge gained is largely forgotten because two or three years elapse before it is utilized.
4. Anatomy is not properly correlated with other subjects in the preclinical and clinical years.
5. The art of dissection is laborious.
6. Anatomists do not have a broad cultural and biological outlook.

These dissatisfactions with anatomy have been written sincerely and honestly by eminent authors, most of whom are not anatomy teachers, and I am sure their opinions will be accepted in the same spirit in which they have been given. While discriminating judgment of a subject usually causes a defense reaction, it is not my intention to argue that anatomy is being taught perfectly in medical schools. However, when all the facts are considered, I believe some of these reproofs may be unjustified while others may be due to influences beyond the anatomists control.

There has been a distinct evolution in anatomical instruction in the United States since Dr. Wm. Shippen first began teaching anatomy at the University of Pennsylvania in 1762. However, it must be admitted that American anatomists have had little to do with instituting the changes which have been made. The first human anatomists in this country studied under the two Hunters in London and the Monros in Edinburgh. Abundant lectures constituted an integral part of their course but some opportunity was given for laboratory work. Bardeen says that dissecting served more to illustrate the textbook than anything else and that emphasis was placed on the quiz rather than on the development of manual dexterity and observation.

Before the turn of the present century, practicing physicians occupied the chairs of anatomy and they taught authoritatively. Gross anatomy was the only subject presented and it took up the major portion of the entire curriculum. During this period, Bardeen states, the general standards of medical education declined rather than advanced and, on the whole, our anatomy was behind a hundred years, consisting of nothing more than a diluted copy of the old English

system. Between 1850 and 1900, many teachers returned from training in Germany filled with enthusiasm for the basic sciences. Professionally trained men holding the Ph.D. degree began numerically and relatively to increase from the beginning of 1900 onward. With this trend the subject of anatomy gradually became subdivided into gross anatomy, histology, embryology and neuro-anatomy. Dissection, rather than lectures, became stressed, but anatomy remained largely descriptive in nature. With the rise and expansion of the other preclinical subjects, the hours devoted to anatomy were, of necessity, shortened. For the past twenty-five years, we have probably, on the whole, or, in part, copied the English policy of making anatomy more dynamic by emphasizing function with structure, by stressing the development of the student's power of observation and by including living anatomy as much as possible throughout the course. Most of the innovations in the teaching of anatomy apparently have emanated from England.

Anatomy is a subject which offers the student an opportunity to learn by doing. This follows the new trend in American education. It is a factual rather than an inferential subject and most of the facts can be proved by careful and critical observation. Developing such powers may be entirely foreign to many first year students. Freshmen matriculating at a medical school are the products of the educational system under which they studied. Their background may have been such that a premium was placed on memorizing rather than on deductive reasoning. At least, we commonly find that they like to repeat by rote what they read in the textbooks. Such students are difficult and sometimes impossible to convert. Testing memory is today the great American pastime. Therefore, on this question, the fault, if any, may rest largely with the formed habits of the student and the training received in the undergraduate educational system rather than in something inherent in anatomy itself.

Why anatomy should be singled out for teaching too much detail is difficult to understand. At one time, our textbooks were unsurpassed in bulk on a medical campus but today they no longer hold this dubious honor. Other preclinical texts are of equal or larger size. Verbosity appears to be a trait in medical texts. The question can be raised as to what is basic in anatomy. Should we expect medical students to dissect the human body completely or is there a short-cut method which covers the subject adequately enough to use as a foundation? All of the critics of anatomy have left us in the dark as to what constitutes anatomical minutiae. In favor of a thorough dissection is the fact that disease can and does attack any structure in man. There are some who feel that pruning of anatomy is a risky experiment. Flexible standardization may be the only answer to this question. One man alone is incapable of judging what is essential and what is non-essential to students who will become either specialists, general practitioners, teachers or investigators. Probably, the best sources of practical anatomy today are the applied and surgical anatomies but these texts in themselves are formidable in bulk. It is to be hoped that the present trend toward more concisely written texts in anatomy will continue.

It seems possible that in the future the period of the last quarter of a century in the United States may be called the golden era of human dissection. The social legislation of the last decade has already created a striking, in some instances, an acute paucity of cadavers. Some anatomy departments have been forced to put a minimum of four students on one body which decreases by one-half the amount of labor required for the dissection but this also has some disadvantages. Society always attempts to progress toward more and more security, and proper entombing is a component part of this endeavor. The Federal government is now planning further social legislation which includes burial insurance. The condition of scarcity, therefore, is not likely to improve. We may soon be confronted with the same situation that has existed in practically all European anatomy departments of the recent past, that is, fifteen or more students working on one body because of the dearth of dissecting material.

Any teacher who is versed in pedagogy is well aware of the fact that forgetting may be as active a process as learning. Loss of memory is not a phenomenon confined to the anatomy student. It is widespread among all individuals. It is estimated that the average human brain can assimilate about 200,000 distinct facts. Any one who walks into a first class medical library gains some idea of the tremendous amount of medical information which has accumulated since the printing press was invented. No one man can expect to do more than gain a superficial knowledge of known medical facts. Teachers cannot assume responsibility in anatomy or in any other medical subject for the retaining powers of students after they advance to other courses. There are certain psychological laws of learning, one of which is repetition. Under the present system, there is undoubtedly little of this in respect to anatomy in the sophomore year, either because of the time factor or because the teachers may not be interested in presenting morphological facts.

If anatomy is in a sealed compartment, it may be possible that instructors other than anatomists contribute in putting it there. The current approach is based on the idea that correlation of anatomy with other subjects be done by the teachers in the advanced courses. Whether this is done adequately or at all is speculative and depends on the background and ability of the individual teachers. Function depends on structure. The action of drugs on the human body depends not only on their chemical and physical properties but also on the structure of the body tissue. Biochemistry depends on cellular structure. Bacteria may locate in various parts of the body because of structure and pathology is nothing more than abnormal morphology and function.

Some advocate that young surgeons, internists, radiologists or any medical teacher who may be interested be allowed to take charge of gross dissection. I believe this would be a major mistake. Because a man is specializing in one of the clinical subjects is not a guarantee that he is qualified to teach anatomy. Good teaching requires a sound knowledge of the subject, self interest and an understanding of the principles of pedagogy. Dissecting the human body is time consuming. Those clinical teachers who have responsibilities in the wards

of the hospital or who have a private practice almost invariably give priority to their dramatic, exciting or needy cases.

If we search for a precedent, we can mention that before the turn of the century physicians occupied the chairs of anatomy in this country and it is generally conceded that the period of their incumbency represents one of decline in anatomy teaching. In England and Scotland today the habit of selecting surgeons to fill the chairs of anatomy is being questioned. Then, too, it is difficult to understand why anatomy should be of more importance to the clinical men than is physiology or other basic subjects. More integration of anatomical subjects will undoubtedly occur but no matter how much juggling of medical subjects is done, we can forecast that students will forget many of the facts presented to them. Anatomical knowledge is going to increase rather than decrease. The human body is so complex that under any system it will have to be divided into regions for study. What may be just as important as the curriculum is the caliber of the students and teachers. Carlson says "I would put first things first in this field and that is: *able men*." Our progress in medicine may occur, mainly, in proportion to the number of competent individuals we have in all branches of medicine.

None of us can argue against the view that anatomists should have an extensive cultural and biological background. Broadening the scope of anatomy to include a study of individuality, growth, the aging process, the endocrines and heredity as recommended by Gregg will undoubtedly have to be done—if not entirely in anatomy, then somewhere else. Growth and the endocrines are now being taught to some extent. Individuality has long been neglected as a medical study. Geriatrics is becoming increasingly important and may continue to be so as time goes on. More and more notice may be taken of the health of all individuals as it has in the strongly nationalistic countries of the world. Heredity will be just one of the phases of this program.

It is not intended in this discussion to imply that anatomy is being taught ideally or that its various subdivisions are placed perfectly in the curriculum. I believe that certain obvious conditions exist which predispose us to teach as we do. On the whole, all teachers try to maintain the standards suggested or imposed on them. We are supposed to teach anatomy from 14 per cent to 18 per cent of the total curriculum hours allotted to medicine. In a 4,000 hour schedule, this would amount to between 560 and 720 hours. We adhere very closely to these requirements and select as carefully as possible from the available anatomy texts. This time allotment does not allow for repetition which is so important in the learning process. Nor have the investigating boards overtly frowned on the divisions of anatomy into gross, histology, neuroanatomy and embryology. Specialization of these subjects has occurred for the same reasons it has in other fields of medicine. Any of these subdivisions can employ the full time of a teacher in analyzing the literature, sifting the wheat from the chaff, and yet allowing some time for research, which is considered highly important. Also, those anatomists who annually examine the

questions given by the state and national board examiners are cognizant of the fact that a great amount of detailed information is asked covering all parts of the body. Clements, in a special study of the questions given by examining boards, says that they refer to a maze of anatomical detail; that most of the questions ask for description, definition or direct information and that gross anatomy is dominant in the minds of the examiners. He concludes that a broad general knowledge of the whole subject is necessary for success in these examinations. Likewise, clinical men, teaching in the specialties, frequently hold the students in the upper classes for diversified and minute anatomy.

In spite of all criticism, the anatomy department still remains the best place where medical students can learn and appreciate the architecture or design of man. In contrast, the laboratories of physiology, pharmacology, biochemistry and bacteriology use routinely such animals as frogs, guinea-pigs, rabbits, cats and dogs to demonstrate their experiments. In these courses, the student must draw on the geographical and cellular knowledge of man learned in his first year to understand and appreciate them. Whether they are getting any help along the way from the preclinical teachers is speculative. If discontent and agitation continue, possibly some day the individuals who are interested in medical education will assemble and decide exactly what is the significance of the following terms in respect to the teaching of anatomy: memory, detail, forgetting, correlation, labor and biological background.

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The Functioning of a Department of Oncology*

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It is no great extension to carry the ideas underlying the organization and practice of tumor clinics to the teaching of oncology to undergraduates. Tumor clinics have been fostered and encouraged for a number of years by the American Medical Association, the American College of Surgeons, the American Society for the Control of Cancer, many state and local cancer committees and other interested organizations.

The same reasons which make desirable the management of many tumor patients by consultation between various specialists or through a tumor clinic apply to the development of a department of oncology in medical schools and their respective hospitals. These are briefly: (1) Tumors occur in any and all regions of the body and, therefore, require the collaboration of all specialists and the use of highly developed instruments and apparatus for their early detection. (2) The possibility of complete removal and/or destruction of malignant tumors is in direct ratio to their age when they give the symptoms which bring patients for examinations. (3) The treatment of patients with malignancies in various parts of the body requires different techniques depending on the circumstances presented by each individual.

Still other reasons which may be given are the increased incidence of tumors, whatever the causes, which will not be discussed here. In this country, approximately 150,000 people have died of the disease each year for the past several years. Estimates as to the number of living cases per death are from two to five. Either number is sufficient to warrant the most concentrated of attention. Unlike that of most other diseases, the mortality of untreated cancer is 100 per cent.

The teaching of oncology is scattered among various departments of medical schools. It usually begins in pathology but the usual courses in this subject do not stress many of the organs particularly important in oncology such as the breast, the prostate, the thyroid, the rectum. Ordinarily the emphasis is on other organs, such as the heart, kidneys, liver, lungs. This may be necessary because of limitations of time but it is inadequate for oncology. These omissions should be filled in at some time but usually they are not in most medical schools. Such lacks can be supplied in special courses in oncology.

Even though the statement is frequently made that cancer is not a single disease but a number of different diseases, it can be stated with equal truth that there are a few common denominators in all cancers and all of the different kinds can be recorded under a few headings. This, as is clear, depends on the point of view, whether clinical, pathological, biological and/or

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experimental. But even in its clinical aspects, cancer forces on us a supreme unifying concept; the goal of oncological practice is early diagnosis and prompt and radical treatment. It can be said that the time at which patients with tumors should consult their physicians is in the stage in which the diagnosis cannot be made by ordinary means. In other words, the differential diagnosis is of the utmost importance in separating tumors in their early stages from other conditions. Becoming expert in oncology, therefore, predicates, first, becoming a good general doctor.

Another argument for the desirability of special courses in oncology can be cited from the experience of the Division of Cancer Control of the Department of Health of the Commonwealth of Pennsylvania during its brief two years existence. In about 20,000 cases the average delay time between discovery of symptoms and radical treatment was about 15 months. Four of these months were due to delay on the part of physicians. Extenuating circumstances existed in some cases, such as the presence of diabetes, hypertension, nephritis, but nevertheless there is an obvious and woeful lack of that "suspicious" mind so necessary for the diagnosis of tumors. Obviously the place to begin developing it is in the medical school.

Still another reason is one which is becoming increasingly important. The last five or more years have seen an increasing amount of education in medical matters offered to the general public. Newspapers have opened their pages to much more medical information than formerly. This is equally true of the radio. Working in both directions, as many such processes do, as more and more people become interested, more and more demand is made for instruction. This is reflected in more pointed questions asked in the doctor's consulting room and in a greater and greater demand for speakers for lay audiences. Needless to say, to do these things well in cancer, as they must be done, requires a degree of correlation somewhat higher than can be acquired without specialized courses in the subject.

For the past four years, a Department of Oncology has functioned in a medical school, namely, the Hahnemann Medical College and Hospital of Philadelphia. Beginning as an experiment in both pedagogy and organization, the Department has thrived in both teaching and in the organization work of the Tumor Clinic of the Hospital. The following describes briefly the course as given to the students of the Medical College, then a few words will be added as to the relationship of the Clinic itself.

The roots of cancer knowledge ramify into many places. The mother subject is biology and the disciplines of biology, related most intimately to cancer, are genetics and experimental embryology. Biology is having chemistry and physics introduced into it very rapidly. Mathematics has been there a long time, especially in the form of statistics, but there is scarcely any subject which cannot contribute to cancer knowledge.

A few remarks are made about semantics, since a survey of the nomenclature of oncology shows a woeful lack of attention to this important branch of knowledge.

So-called "symbolic logic" comes in for a short discussion. The work of Woodger is mentioned, who has even introduced qualitative terms into equations! By the methods of symbolic logic, it is pointed out to the students, gaps are revealed, experiments indicated and the planning for investigative work is put on a firmer foundation.

For further broadening of background, certain philosophical considerations are included. While this may be far afield from technical medicine and thus from oncology, nevertheless, most individuals work and think according to some philosophy whether they admit it or not. If they do not, they are more apt to find confusion in the correlation which is so necessary in medicine. As an introduction to philosophical concepts, the students are reminded of the orderly way in which growth and development proceed. From a tiny microscopic bit of tissue, the fertilized ovum, there develops a completed organism. This order in development has caused many of the great biologists to ponder deeply on its meaning and significance. Aristotle's four principles are mentioned. Harvey's views are presented. He states, it will be remembered, that "the efficient cause of the chicken is hard to be found out."

Hormism or psychological biology is mentioned. The coining of words, however, with psychological background, while convenient at times, neither explains nor controls phenomena.

Teleology is discussed briefly and the effect before the cause. L. J. Henderson's book, "The Fitness of the Environment," is recommended as a helpful antidote to unscientific thoughts about teleology. Kant is mentioned and his help in separating metaphysics from science. Organicism or "we murder to dissect" is mentioned, to be cast aside as insufficient philosophy for physicians. Then there are introduced the ideas in "Science and the Modern World" and other writings by A. N. Whitehead. The concept of the organism as a whole is emphasized. An organism is a system devoid of isolated events; no organism is a sum of its parts but the parts fitting together produce a new and distinct entity. In fact, all things can be recorded as organisms. The difference between the living and the dead may be looked on as differences in degree of organization and dynamics.

The principle of indeterminacy is mentioned as a prod to the students to use statistical methods in their work and to remember there is a "probable error" not only in their thinking but also in their data.

Nevertheless, it is emphasized that science gives but "a theory of the world and not a pocket edition of the world itself." (Needham). There are other philosophies which may be used on specified occasions. While impossible to cover even partly, Pareto's studies in his "The Mind and Society" are mentioned. In "this mysterious thing called cancer," to use the words of many a layman and some, alas too many, professional people, sentiments, residues, derivations, pseudo logicexperimental abstractions play an important part as the word "mysterious" indicates. The stress of dealing with cancer patients (and their relatives) leads to all sorts of non-logical statements and procedures and literature; of other derivations the less said the better.

Return to local matters is made by stating that study of growth and development may be begun at many points but for convenience, the fertilized ovum is chosen. Parthenogenesis is discussed as of interest in the theory of development of certain tumors such as teratomas, dermoids and the like. Fatherless rabbits are mentioned. The word "growth" is analyzed into numerous kinds, such as growth in size, in number, differential growth. The "organismal" theory versus the cell doctrine is discussed. The intrusion of sex is mentioned.

Potency, determination and regulatory phenomena are rehearsed. The development of an organism is studied by way of proliferation, differentiation and organization of cells and tissues. The regulative capacity of the fertilized ovum and of cells is discussed. Mosaic eggs are mentioned. The organizer phenomena are rehearsed along with the maintenance of species specificity. It is emphasized that in malignant growth it is the organization phase which is lacking, differentiation which is disturbed and proliferation which keeps on as it can in normal tissues.

Then are discussed seriatim, regeneration, transplantation, explantation, interplantation, repair and replacement. Their regulation and their occurrence as a function of potency of cells along with species specificity and the independent, yet dependent nature of proliferation, differentiation and organization are emphasized. Malignancy occurs when the potencies of organization are destroyed and those of differentiation are disturbed. Transplantation of tumors is the application of these subjects along with tissue culture and tumor transplantation into foreign species, e.g., rabbits' eyes.

Under the heading of environment are discussed many factors and their influence on the above discussed processes. Among these are temperature, light, numerous chemical compounds and aggregations, vitamins, hormones. The story of the chemical carcinogens is told. Diet is discussed in relation to cancer. Hormones and vitamins in cancer are stressed especially.

It is necessary to rehearse the principles of genetics for most classes have not studied them. When this is done, the accent is laid on what is known of the inheritance of the predisposition to cancer which includes numerous phases, such as chronic irritation versus genetic influence, in the origin of tumors.

The effect of irradiation on cells and tissues, both normal and cancerous, is the subject of special lectures.

The word "pre-cancerous" is considered with all its meanings and implications. The students are told that when a lesion is called "pre-cancerous" there is implied a prophesy. The ramifications of this statement are obvious.

Attempts to link microorganisms and cancer date from early times. "Cancer houses" are described; "cancer communities" and "contact" infections were believed in by many individuals. Students are told that while certain organisms have been found so closely related as to be regarded as "causes" of cancer, they have always been special ones and in special situations. The development of cancer in old lesions and scars of tuberculosis and syphilis is mentioned. The relation of various animal parasites, such as nematodes, tapeworm cysts, bilharzia, are detailed.

Viruses receive considerable attention. Fowl sarcoma, Shope rabbit virus, frog tumor viruses, etc., are explained. Again, as a generalization, it is stated that it is very unlikely that the general cause of tumors is a virus or an infectious organism.

The well known "somatic mutation theory of cancer" is then described in great detail. The meaning of the word "mutation" is discussed and it is stated that by somatic mutation is meant a change in the internal make-up of cells. This serves as an excellent text for calling the attention of the students to the necessity of intracellular chemical investigations.

Biopsy and other methods of diagnosis are stressed. The methods of obtaining biopsy material are rehearsed, especially what not to do in this connection.

Tumors in lower animals are described, it being stated that tumors probably occur in all multicellular organisms; at least, wherever tumors have been hunted they have been found. Thus tumors in horses, in dogs, in birds, in fish, etc., are mentioned as examples. The question of plant tumors is also discussed and the statement made that, allowing for differences in structure, plants also are probably subject to tumors.

Several sessions are devoted to chemistry in cancer. The students are told that the control of natural phenomena is made possible by knowledge of chemistry and physics rather than other subjects. There are several distinctions. There is a chemistry of cancerous tissue as contrasted with normal tissue. There is a chemistry of body fluids in individuals with and without cancer. There is a dynamic chemistry and physics of cancer in which the key subject is intracellular metabolism. The cancer cell builds up its internal equilibrium differently from a normal cell and studies of protein synthesis are badly needed in this phase of cancer knowledge. Numerous examples are given of experimental work dealing with these different phases of growth.

The important subject of trauma and cancer is treated quite conservatively. The students are told that, in general, trauma is not a "cause of malignancy" but that occasionally a relationship may be present. The standard criteria are then rehearsed and detailed exposition given of tumors in which trauma and occupational conditions have been thought by some to be related to tumors.

In part two of the course, patients are presented to the students as texts (1) to show individual peculiarities of the particular patient and (2) to point out the relationship of that patient's disease to the general principles discussed before. A number of points in the patient-physician relationship are discussed. The students are told never to forget that patients with malignancy have a serious, fatal diseases. Very often, indeed, the fate of the cancer patient depends on the first doctor who sees the individual. This dependence includes not only actual handling of the physical disease but of the patient's mental make-up as well. The question of "shall the patient be told" is discussed. The handling of relatives is stressed. During the course of the term most of the commoner forms of cancer are presented. After the patient is dismissed, discussion begins in which the students are invited to participate.

Effort is made to find patients with early lesions. Unfortunately, this is not always possible, but, at least, the opportunity is seized for repeating remarks about delay time.

Much time is devoted to a consideration of the general handling of the cancer patient. Nursing care, diet, the care of wounds, are discussed thoroughly.

Cancer quacks come in for their share of discussion and a classification is given of these, the students being advised not to become too thoroughly annoyed at cancer quacks and reasons for these statements are given.

METHODS OF RATING STUDENTS

During the course of the year by means of discussions and observations of the behavior of the students toward the subject, it is possible to obtain a general idea of their ability. A written examination is given at the end of the year. The questions include both background and clinical types and they are rather of the discussion kind than the dogmatic "yes" or "no" variety.

SPECIAL UNDERGRADUATE ACTIVITIES

Sections of the class attend the regular tumor clinics of the hospital. This has the disadvantage of presenting the rarer and more complicated cases for, as a rule, these are the ones that receive the most attention in the tumor clinic. Nevertheless, the advantages are that the students see numbers of cases and hear discussions from the various specialists attending the clinic and become familiar with methods of handling such patients.

Ward classes, in groups, are held twice a week. Instruction includes differential diagnosis, the use of various special technics, such as that of biopsy, special instruments and the general methods of irradiation.

An undergraduate Oncologic Society was organized several years ago. The students meet once a month, present a case history for diagnosis and discussion and listen to a discourse by some one not a member of the faculty of their own school. This latter point has the advantage of introducing a wider variety of viewpoints.

A prize is offered each year for an essay on a subject dealing with tumors. The response has been gratifying and each year a number of excellent papers have been presented in competition. Some are reviews of the literature, others are clinical, some are of work done by the students themselves, usually a collection of clinical cases that they have seen.

RELATIONS TO OTHER MEMBERS OF THE STAFF

The relations of the Department of Oncology with the other departments of the Medical School and Hospital have been most cordial. The Oncology Department is organized primarily for teaching and for the study of tumor cases as they appear in the Hospital. Consultation is available on request.*

*For further details of the organization of the courses, pertinent literature and other data, see: Reimann, Stanley P., *The Teaching of Oncology*. Growth 6:273-340, 1942.

The Teaching of Stomatology to Medical Students

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It is becoming more and more apparent to medical educators in general that students of medicine need instruction in the healthy and diseased conditions of the mouth as well as its accessory structures. Even more aware of this fact are the teachers of otolaryngology, pediatrics, gastroenterology and dermatology. A physical diagnosis by the physician is hardly complete if he omits a thorough investigation of the condition of the oral cavity.

Since diseases of the teeth and their surrounding parts are more common than disease in other parts of the body, the physician is frequently called on to diagnose diseases of the oral cavity and, what is more important, to relate his findings to the ailment of his patient. At present, some general practitioners in medicine have difficulty in recognizing, much less evaluating, even the most common diseases of the mouth. There is little doubt that cooperation and consultation among physicians and dentists should be extended. It is disconcerting to the dental consultant in the hospital to see able physicians daily defer to a mere expression of personal opinion in matters pertaining to the mouth. It is apparent to medical and dental educators alike that the medical student has been incompletely trained for his life's work unless he has had some instruction in the fundamentals of disease in the oral cavity.

It would be absurd to allow the medical practitioner to acquire dental and oral information from the same sources as does the layman (when he discovers that his patients demand such information). The layman is more likely than not to believe the myths and misinformations of our grandmothers or to listen to the tales of and use the remedies advocated by advertisers.

The solution of the problem is as obvious as its existence. It lies in an organized course of instruction in stomatology for the undergraduate medical student, preferably in his third or fourth year, when he is ready for and can best assimilate such instruction. A few scattered lectures apologetically inserted in histology, pathology or surgery courses do not solve the problem but serve only to make it more apparent. Stomatology is a branch of the healing art, and such instruction can be well organized and should be given in a coherent series as a single integrated course.

The "proof of the pudding" lies in the response of medical students to such a course in stomatology. We gave stomatologic instruction informally at the Rush Medical College before that school affiliated with the University of Illinois, and later, both informally and officially, at the University of Illinois, College of Medicine. Over a period of three years the response of the students has been uniformly good. The students exhibited a marked interest and desire to know more of this terra incognita. In fact, it was at the request of the

students themselves that stomatology was officially made a required course. Numerous medical practitioners have taken this course of instruction and expressed their appreciation and thanks. These men point out the necessity of a knowledge of stomatology in the practice of medicine on the basis of years of actual practice.

However, certain difficulties have yet to be overcome. In the first place, not all medical educators recognize the fact that students of medicine need and want a course in stomatology just as they want and need a course in pharmacy, ophthalmology or otolaryngology (Asgis, Johnson). Only twelve schools give their students a well-integrated course of instruction in stomatology. Ten schools, or more, give occasional lectures interspersed in different courses. A number of schools give no instruction at all and from many no information was obtained.

In the second place, it is not a simple matter to find an instructor adequately equipped to teach stomatology to medical students. The average physician without dental background is obviously unfitted for this task, as is the dentist without a practical medical background. The dentist who has spent some time in a hospital acting as dental consultant to the hospital and in charge of dental interns, the dentist doing research in oral medicine, and the oral surgeon are well equipped and have adequate stomatologic and medical backgrounds. Their specialized training and interests make them well suited to the task of teaching stomatology to the future physician.

In the third place, there is an acute lack of teaching material. Such reference books as are available are too perfunctory in content or so detailed as to be suited only for the dental student. A simple, adequate textbook in stomatology seems indicated at this time. This text should be prepared specially and organized to meet the needs and interests of the medical student and the medical practitioner. Such a text may soon become available.

Under the present circumstances each course represents an individual organization of material which reflects the background and the training of the teacher. The general aims and the content, however, do not vary, although the names of these courses frequently do vary. Since specialists are not desired, one need not progress beyond the presentation of fundamentals. The approach and the terminology should be simple and nontechnical, and the material organized as completely as possible. One must assume from the beginning that although the students are capable and well grounded in the basic medical sciences, their background in stomatology is poor or lacking. Emphasis should be placed on (1) the cause, diagnosis and treatment of dental and oral lesions; (2) the recognition of the mouth and its accessory structures, as foci from which infection can spread to other areas of the body and the routes of such dissemination and (3) the oral cavity as a site in which systemic disease can be manifested. Wherever possible, clinical correlations as well as facts should be presented. Although ward walks are desirable they are often impractical. Bringing the patient to the class is more feasible and a good collection of kodachrome slides simplifies the presentation considerably.

Because the planning and the first year of teaching such a course represents a tedious and difficult task, and mistakes in presentation are inevitable, an outline of a course in stomatology which has proved satisfactory over a period of several years at the University of Illinois is presented here. A more complete and detailed teaching outline will be mailed on request.

STOMATOLOGY

*Outline of a Course of Lectures for Medical Students**

1. Examination of the Oral Cavity (Methods and Significance of Findings). Histophysiology of the Dental Structures.
2. Dental Caries (Pathogenesis, Course and Symptomatology). Extensions of Periapical Infections (Routes and Sequelae). Odontalgia (Differential Diagnosis and Emergency Treatment). Differential Diagnosis of Caries, Enamel Hypoplasia and Dental Erosion.
3. The Caries Problem in Medical Practice. Myths and Facts (Pregnancy and Caries, Calcium and Dietary Therapy, Etc.). Control of Dental Caries by the M.D. Present Status of the Pulpless Tooth.
4. Periodontal Disease (Pathogenesis, Etiologic Factors and Differential Diagnosis). Stress: Vincent's Infection and Diffuse Alveolar Atrophy.)
5. Oral Sepsis and Its Relation to Gastrointestinal Disorders. Focal Infection.
6. Oral Hygiene (Importance, Methods, Etc. Fetor ex Ore). Care of the Mouth in the Sick (for Nurses).
7. Radiographic Interpretation. (General Review of Above.) Dental Extraction. Indications and Contraindications. (Demonstrations of Technique and Anesthesia.)
8. Malocclusions of the Teeth (Impacted and Malposed Teeth, Thumb-sucking, Mouth-breathing, Etc.). Afflictions of the Temporomandibular Joint and Facial Disharmonies (Subluxation, Ankylosis and Overclosure).
9. Fractures of the Jaws (Diagnosis and Management). Hare-lip and Cleft-palate Repair.
10. Differential Diagnosis of Soft-tissue Lesions (by Regions and by Classes) (Emphasis on Tongue) (Include Dermatologic Lesions).
11. Oral Neoplasms (Early Detection and Treatment).
12. Oral Manifestations of Systemic Diseases (Diabetes, Blood Dyscrasias, Nutritional Disorders, Etc.).

*Scope of course given to Senior Class, University of Illinois College of Medicine.

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The Teaching of Contraceptive Measures in Medical Colleges

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At a meeting held June 6, 1942, at Atlantic City, New Jersey, the Council on Medical Education and Hospitals of the American Medical Association passed the following resolution: "That it is desirable for medical schools to include in the curriculum for medical students adequate instruction in human fertility."

The wording of this resolution may seem indefinite and somewhat general unless its real meaning is made clear by analyzing the background for its passage.

In 1936, the Board of Trustees of the American Medical Association, following instructions from the House of Delegates, appointed a committee to study the subject of human fertility with special reference to contraceptive procedures in medical practice. This committee reported to the House of Delegates at the Atlantic City meeting of the American Medical Association in 1937 and after discussing the many phases of the subject, the report concluded with the following statement: "In view of the frequent occurrence of medical indications for the prevention of conception, and in view of the medical complications that arise from ill advised contraceptive practices resorted to by women on their own initiative and without medical advice, which call for medical care, medical students should, in the opinion of your committee, be instructed fully concerning fertility and sterility and taught the therapeutic considerations and therapeutic application of contraceptive measures."

The final recommendation of the committee was: "That the Council on Medical Education and Hospitals of the American Medical Association be requested to promote the thorough instruction in our medical schools with respect to the various factors pertaining to fertility and sterility, due attention being paid to their positive as well as negative aspects."

At this same meeting a resolution from the American Neurological Association was introduced which after referring to the then recent decision of the United States Circuit Court of Appeals that physicians may legally prescribe contraceptive measures in the interest of life and health, went on to state that: "The American Medical Association is urged to take up at once the matter of the proper teaching of contraception in medical schools and the organization of medically supervised contraceptive clinics in hospitals. The time has passed for discussion and debate. The fact remains that the physician is now free to use contraceptive measures in his practice and should be educated in their use."

This resolution and the report of the Committee on Contraceptive Measures, according to the usual procedure, were referred to a Reference Committee for consideration. This committee reported with favorable comments to the House

of Delegates and endorsed the recommendation of the Committee on Contraceptive Measures, whereupon the House of Delegates adopted the report and instructed the Council on Medical Education and Hospitals to take appropriate action with the medical colleges.

With such a background of thorough discussion, with definite mention in the report of the Committee on Contraceptive Measures that in the opinion of that committee "medical students should be instructed fully concerning fertility and sterility and taught the clinical considerations and therapeutic application of contraceptive measures," the resolution of the Council can mean only that adequate instruction in human fertility includes methods of prevention or limitation of conception when medically indicated. Further, it may be said, that this rather belated action of the Council is evidence of a certain amount of apathy or timidity prevailing among some of the medical profession because of an outspoken but numerical minority, and, also, that the medical schools of the country are lagging behind and have not responded to the modern demands in the field of instruction, a demand which is now becoming insistent from increasing numbers in the medical profession and from the public.

The credit for the awakening of the present wide interest in the guidance of human reproduction cannot be claimed by the medical profession. It is true that for some years physicians and medical teachers have discussed the increased hazards of pregnancy in women with various physical impairments and sounded warnings of the dangers of the transmission of inheritable taints, but the matter was left largely to the discretion of the family with the implication that sexual abstinence was the only solution. In medical schools students were, and largely still are, taught the contraindications for pregnancy but are not taught what to do or the methods to prevent conception in such cases. As a result, women turned from the ethical physician to the abortionist, the drug store, the instrument house and even the slot machine for relief.

An aroused womanhood, aware of the evils of uncontrolled contraceptive practices as well as unlimited reproduction challenged this *laissez faire* attitude of our profession and initiated the birth control movement. All are familiar with the obloquy and persecution heaped on the sponsors, but time has brought their vindication. Perhaps, some of the trouble came from the choice of the word "control," many interpreting it in the sense "to prevent" and thus assuming that the movement was entirely propaganda for contraception. Professor C. E. A. Winslow drew attention to this error in thinking in an article in the *Birth Control Review* of January, 1938, in which he said, "The word 'control' is too often interpreted in the sense of restraint, check. This is only, however, a secondary implication and a misleading one. The primary dictionary definition is 'power of direction, command'."

This latter meaning was the interpretation of the founders of the Birth Control League but to avoid misunderstanding the name was changed in March, 1942, to the Planned Parenthood Federation to indicate better and more clearly the real objective, namely, the intelligent planning for parenthood,

to encourage reproduction when advisable just as much as to seek to check it when medically necessary, all in the interest of better maternal and child health.

This organization has won wide public support and has made great progress in the last few years. There are now 34 state groups affiliated with the national body and others in progress of organization. As of July, 1942, there were 806 clinics giving instruction to patients in contraceptive measures on health indications; of these 265 were in local health departments, 226 in hospitals and 315 were operated by doctors supported by local committees of interested citizens. Patients enter these clinics as referred cases from their family physicians or health officers, and while the primary object is the teaching of appropriate means of avoiding conception in each case, if found medically advisable, the necessary physical examinations have led to the discovery of a number and variety of pathologic conditions which have been referred elsewhere for correction.

Several state medical organizations have taken definite official action favorable to the movement. Alabama and Arizona endorsed the action of the American Medical Association in 1938. The House of Delegates of the Colorado State Medical Society (1942) took similar action. South Carolina (1938), Georgia (1939) and Florida (1942), by resolutions, directed their respective state health departments to give contraceptive information when medically indicated. The Tennessee State Medical Society (1942) officially approved the giving of child spacing information by or under the direction of physicians. The Virginia State Medical Society (1942), by resolution, encouraged private practitioners to accept responsibility for giving information relative to the prevention of pregnancy for medical reasons; its inclusion in clinic service for indigents and that it be made available in state operated sanatoria for tuberculosis patients. West Virginia (1942) by resolution "requested the physicians of the state to impart the necessary contraceptive information to those women whose health is such that they should not bear children and to those mothers whose health has been impaired by excessive child birth." Texas (1940) passed the resolution "that the teaching of scientifically correct methods of prevention of conception and the actual practice of prevention is a suitable subject for teaching and study in medical colleges and in recognized and professionally controlled women's clinics," and in 1941 the same society, on recommendation of the Committee on Maternal and Child Health "approved the inclusion of birth control information as an activity of the Texas State Board of Health." The present officers of this state medical organization are on record as interested in seeing that the recommendation is carried out.

The attention of other state health departments has been drawn actively to the need of including the providing of contraceptive information as a part of their programs for better health of the underprivileged, especially since the pioneer work of North Carolina in this field. According to Cooper, Pratt and Hagood¹, "The State Board of Health sent a letter to each county health officer stating

1. Four Years of Contraception as a Public Health Service in North Carolina. *Am. J. Public Health*, 31: No. 12, December, 1941.

that he might, if he considered it desirable, after securing the approval of the county medical society or the county board of health, add instruction in contraception to the other medical services provided for the underprivileged." For the carrying out of this suggestion the services of a health nurse and contraceptive supplies needed for the first few months were furnished by the State Board of Health. Six counties availed themselves of this offer the first year, but as of December, 1941, of the 81 counties having county health services, 61, or 75 per cent, had included contraceptive clinics as a part of their regular health program.

To some degree, however, apathy and even antagonism persist in medical and education circles. Many doctors ask why should the profession concern itself when so many are already practicing contraception on their own initiative. Unfortunately, there is good ground for this comment. Eastman² states that the investigation of Dr. Raymond Pearl demonstrated that 55 per cent of the married population of the United States used contraceptive measures either regularly or intermittently some time in their married lives, and that Hines believed the number to be from 65 to 75 per cent. Further, based on the data in *Fortune* magazine, February, 1938, \$250,000,000 was spent annually for contraceptive materials of which only \$38,000,000 was spent for condoms. Eastman points out that more than \$200,000,000 must have been expended by women for the 636 known brands of products and devices for the female, sold for the most part under the euphemism of "feminine hygiene." That many of these articles are useless and some actually harmful is well known, but they are widely distributed practically without restraint from instrument houses, drug stores and even slot machines. Undoubtedly, there is a wide prevalence of attempted birth control of this "bootleg" type with all the evils of such practice with which, unfortunately, we are too familiar in this country. The evidence is mounting, however, that physicians are awakening to their responsibility in this matter and urging that the medical profession take the lead in directing public thinking and private practices in the field of human reproduction with the objective of better maternal and child health, emphasizing that this aim is the only appeal to the physician in giving contraceptive information.

Unfortunately, the medical profession is not prepared to meet the situation today because of the lack of training in the practice of contraceptive technique. Very few medical colleges give adequate instruction on this subject and the practitioner turns to the detail man or instrument house for help. While not a great amount of training is necessary, a certain degree of knowledge in the selection of the appropriate method or device for the individual case and skill in application are required, lacking which, failure too often results and the practitioner condemns the practices rather than his own lack of knowledge and skill. That there is a wide recognition of their deficiency in this field is evidenced by the fact that when in August, 1942, the Planned Parenthood Federation sent out a post card offer of a free copy of the second edition of "The Techniques

2. *The Aims of Birth Control and Their Place in Preventive Medicine*. New Internat. Clinics, Vol. 1, Series 5, 1942.

of Conception Control," within thirty days more than 34,000 doctors requested copies, and this was in addition to the 60,000 previously distributed to obstetricians, gynecologists, health officers and medical students.

The time is certainly at hand when medical colleges must face the situation squarely. It is not urged that required courses in contraceptive teaching be instituted in the curriculum as this might be contrary to the conscientious objections of some teachers or students especially in those colleges where religious views dominate this subject. There can be no objection, however, in all colleges to encourage the teachers in medicine to stress even more the increased hazards to mother and child in the occurrence of pregnancy in women with cardiovascular disease, tuberculosis, diabetes and the like. The neurologist could and should emphasize the often disastrous results of pregnancy in many nervous conditions and the likelihood of inheritance of mental and nervous taints. The pediatrician could dilate more on the advantage of at least a year of maternal care undisturbed by the occurrence of another pregnancy, and the obstetrician certainly should teach the need of a recuperative period after delivery and by adequate instruction in the rhythm of ovulation, he may guide to some extent the occurrence of a following pregnancy.

In colleges where religious objections do not govern the curriculum, an elective course should be offered; it should be elective first so as not to force such instruction on any student who may be opposed to it for any reason; second, so as not to infringe on the already crowded required courses in obstetrics and gynecology, and third, to give the subject a distinctive place with better chance of adequate instruction. The instructor should, of necessity, be well grounded in obstetrics and gynecology and if, in addition, he has a good knowledge of preventive medicine, it would be of great advantage.

In one college in which such a course has been given for more than ten years, the instructor has these requirements to an unusual degree. In his early professional practice he had more than average obstetric experience and later specialized in preventive medicine and is now in that department in the college with which he is connected. With such a background and with a record of ten or more years teaching in the subject, his opinion as to the requirements of adequate instruction in this field should carry considerable weight. He began with five lectures but after requests from students and from his own experience of the need of expansion, he now gives ten didactic lectures in order to cover all phases of the subject. In no sense is he a propagandist for contraception save as a means of promoting maternal and child health. He favors the elective course but believes that a properly given course should offend no student no matter what his religious or racial background, but, on the contrary, a well given course will prepare individuals of all faiths to give advice to patients of all creeds and beliefs.

This instructor (Dr. W. E. Brown, of the Department of Preventive Medicine in the University of Cincinnati) has prepared an excellent "Suggested Outline on Teaching Medical Indications and Techniques of Contraception

Control," copies of which will be furnished interested teachers in medical schools by the Planned Parenthood Federation, Inc., 501 Madison Avenue, New York City. This outline favors giving the lectures toward the end of the junior year after the student has had basic training in obstetrics and gynecology and follows with practical work in the senior year. This practical instruction is given in a clinic maintained very appropriately in a privately endowed children's hospital. Here the students meet patients entering the clinic and are taught to apply their didactic instruction in the selection of those to whom contraceptive information should be given and are then instructed in the practical application of the selected method appropriate to the individual case.

After ten years trial this course has proven its value, so much so that when the instructor, thinking of the increased stress and heavy teaching load imposed on the students due to the accelerated program, suggested discontinuing the course for the present the college administration insisted that it be continued. With the large number of private and health department clinics now in operation, a similar arrangement for practical instruction could be established in practically all localities and meet most requirements.

SUMMARY

The resolution of the Council on Medical Education and Hospitals passed at the request of the House of Delegates definitely indicates the desires of the medical profession and implies that the medical colleges of the country are not giving adequate instruction in contraceptive methods where such instruction should be given for health reasons.

The public demand for better guidance from the medical profession in human reproduction, including child spacing and the prevention of conception for health reasons, is becoming more and more insistent and the situation must be faced.

The opportunity for the medical guidance of a great movement for the better health of the present and future generations of our country is offered; failure of the medical colleges to participate will be a serious evasion of professional responsibility.

The medical student should be taught the contraindications of pregnancy and also the proper methods of meeting such contraindications so that he will not have to seek such information later as a practitioner from commercial detail men, too often with unfortunate results.

Failure of medical colleges to meet their responsibility in this teaching will threaten still further the position of future physicians as guides and counselors to the family in matters of health.

High On a Watchtower*

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As I look at your faces this morning, I cannot but wonder what is going on in the back of your heads. Some of you are very young in years. Many of you have had only two years of premedical training which, in so-called normal times, would have been extended to three or four, or more, collegiate years. Do not, I beg of you, feel that you have been cheated of your youth. Think, rather, with pride and gratitude, that your manhood has been thrust upon you early, at the point of the sword, at the cry of your country's, and the world's, need! From today on, consecrate the youth of which you have been deprived, and every heartbeat of your precocious manhood, to the task which lies ahead!

These days in which you are embarking on the study of medicine are not only days of challenge; they are days of superlative challenge. Forces more deadly than typhus are unleashed on mankind. Whole nations of the earth are sick unto death; the bodies, as well as the souls, of men are smitten with plagues whose names you will not find listed in any medical text. We have learned, to our shocked amazement, that we still live in a world where no horror is incredible, no sadistic cruelty unthinkable, no folly untriable! Moreover, the grisly, ghastly Horesmen are abroad in the world—War, Famine, Pestilence, Despair, Death! Over the entire earth are the feet of their ravaging; in the depths of the sea they lurk; miles high in the air they hover. Though we still have the light of the sun, yet we still have the darkness of the earth, the darkness of men's hearts, to deal with!

"And behold the Lord passed by, and a great and strong wind rent the mountains, and brake in pieces the rocks before the Lord; but the Lord was not in the wind; and after the wind an earthquake; but the Lord was not in the earthquake; and after the earthquake a fire, but the Lord was not in the fire; and after the fire a still small voice—And behold there came a voice unto him, and said: "What doest thou here, Elijah?"

"What doest thou here, Elijah?" The ancient cry, the ancient challenge flung across this modern, man made cataclysm in which we are embroiled. I know what your answer is, because there can be but one answer: "We are here to give! To give, and spend, the very last farthing of our strength, if need be, so that we, too, can become Doctors of Medicine, preventers of disease, salvagers of human wreckage! From now on, until we die, we shall be at the fighting front, the fighting front of a global war in which we serve to save, and not to slay! A global war that must be fought to the ultimate end, an undesisting battle of salvage and reconstruction of men's bodies and minds and spirits! A war of healing, during, and long, long after this present war of destruction, and decimation, has come to its inevitable end of victory for our cause!"

*Address delivered at the Opening Exercises of the Long Island College of Medicine, March 29, 1943.

And may you, at the very last, find rest at least as deep, and satisfying, as that of the ancient Greek who sent back his final report from the other world: "I was Pausanias, Physician, reported to have died of natural disease, but (I tell you) harried to death by sick people always asking aid. In bodiless Hades, however, where (the) one medicine has already been given, I sleep the night through."

It was through Rudyard Kipling that I first became acquainted with Pausanias, so I am sure he would not mind if we borrow from him once more. After all, Kipling admitted to doing the same thing, when he wrote:

"When 'Omer smote his bloomin' lyre
 "E'd 'eard men sing by land and sea,
 "And what 'e thought 'e might require.
 "'E went and took, the same as me."

At any rate, on the first of October, 1908, Rudyard Kipling delivered an address to the students of the Medical School of the Middlesex Hospital, London. During the course of his remarks, he said:

"I have had the good fortune this afternoon of meeting a number of trained men who, in due time, will be drafted into your permanently mobilized army which is always in action, always under fire against Death. Of course, it is a little unfortunate that Death, as the senior practitioner, is always bound to win in the long run, but we noncombatants, we patients, console ourselves with the idea that it will be your business to make the best terms you can with Death on our behalf; to see how his attacks can best be delayed or diverted, and when he insists on driving the attack home, to take care that he does it according to the rules of civilized warfare. Every sane human being is agreed that this long-drawn fight for time which we call Life is one of the most important things in the world. It follows, therefore, that you, who control and oversee this fight, and who will reinforce it, must be amongst the most important people in the world. Certainly the world will treat you on that basis. . . . It seems to be required of you that you must save others. It is nowhere laid down that you need save yourselves. That is to say, you belong to the privileged classes."

Yes, you do belong to a privileged class! Even in times of war you are not asked to shoulder a gun. While your fellows, in your own age group, are being instructed in the arts of primitive and modern killing, you are allowed to pursue your medical studies to the end that you may learn to conserve, and save lives. Moreover, when this present war is ended, most of your fellows who have fought, and survived, on the far flung battle fields of the world will return to civilian life, to the trades and skills which they have known and have developed. You, on the other hand, will spend your lives on the fighting front, soldiers of science enlisted for all your days in the age-old, undesisting battle against disease, suffering, ignorance, want.

Some of you will go into the practice of your profession in this country, helping to minister to the human wastage of war among those who return,

helping to guard our shores against the importation of tropical diseases, as well as aiding in preventing, and controlling, the multiplicity of diseases which have afflicted our people ever since the white man came to the Americas. Many of you, perhaps, the majority, I venture to predict, either of your own free will, or under Government orders, will go to the far corners of the earth, to the lands of Europe, Africa and the Orient that have been devastated, and depleted, by the fires of this global war. Think what the needs will be! Whole portions of the world in ruins! Whole peoples hungry, homeless, desperate, shattered in minds and bodies! Starvation rampant! Disease rampant! The grisly Horsemen Famine, Pestilence, Despair, Death still a-ride!

Whether the sphere of your duties will be at home, or abroad, an ever widening range of familiar, as well as strange, tropical diseases is certain to command an ever increasing share of your attention. As Mackie, and others, have pointed out, bacillary dysentery carries one of the greatest threats of chronic invalidism of any disease our troops are liable to contract on a large scale. Among other bacterial diseases of potential, or immediate, menace to our troops in the tropics must be mentioned bubonic plague and cholera, against neither of which do we possess completely proven immunizing procedures.

Among the virus diseases, yellow fever apparently is subject to control among our troops by large scale vaccination. There remains the ever present threat of the introduction of yellow fever, through modern speed of travel, into areas hitherto free from this scourge. When we come to influenza, we possess no more proven methods of control against this devastating infection, when it assumes pandemic proportions, than we did in the ghastly years 1917-1919.

When we consider the protozoan diseases and their relatives, the filariae and schistosomes, we find a group of diseases which constitute the greatest menace of all to the health of our troops going into the tropics, and near tropics. Already in North Africa, India and the South Seas, and to a lesser extent in China, we have large bodies of susceptible troops massed in some of the most heavily diseased centers of the entire world. As Coggeshall has very recently pointed out, these men are already acquiring infections, particularly malaria and bacillary and amoebic dysentery, in alarming proportions. At the fall of Bataan, it has been estimated that 85 per cent of our troops were incapacitated with acute malaria. And Coggeshall states that "in some areas of the Southwest Pacific the incidence is almost as high. Recent arrivals of United States troops from these areas show that a high percentage of the medical cases are suffering from malaria, or have recently recovered from its effects."

Walker states that filariasis is already a red hot problem in our armed forces, and that the Army and Public Health Service do not know what to do about it. Strange as it sounds, some of troops have developed elephantiasis within 20 weeks of their arrival in Africa. African sleeping sickness also looms as an ever present menace to our troops in equatorial Africa. The possi-

bility of its introduction into the United States does not seem marked at present, but there is a real, and ever present, danger of the importation to our shores of another form of trypanosomiasis, Chagas disease of South America.

Among the helminthic, or worm, diseases, schistosomiasis in North Africa and in the Near East, as well as in Asia, constitutes a health hazard to our troops of commanding proportions. Not alone this, there is the ever present threat of the introduction of this, and other strange diseases, to our own shores. In this connection, there is a very real danger that our soldiers returning from Africa may introduce in over-flowing measure the virulent Old World hookworm, *Ancylostoma duodenale*, into the United States.

Then, too, we are certain to find that this global war will bring into sharp, and ghastly, focus the problem of venereal diseases. Syphilis, to mention only one of the many venereal diseases, and civilization would appear to be concomitant, and we face the possibility that the white man may bring home, from far flung fields of combat, weirdly virulent strains of *Treponema pallidum* which his philandering forebears sowed among the brown and the black races of the world. We bid fair to re-learn in bitterness the ancient lesson that, if the fathers have eaten forbidden fruit, the children's teeth must pay for it!

From this avowedly incomplete, and hurried, survey emerge two basic facts. (1) The ever present menace of strange, as well as familiar, diseases casts its shadow over our globally distributed fighting forces. (2) As a corollary, there is an ever increasing probability that, in the wake of this war, the flotsam of certain exotic diseases, from which our country has so far been free, will be cast on our shores. On November 1, 1940, in an address before the National Institute of Health, our Commander in Chief, President Roosevelt, emphasized that the United States is less than a day by plane from the jungle type of yellow fever of South America, less than two days from the sleeping sickness of equatorial Africa, and less than three days from cholera and bubonic plague. Then, he added: "The ramparts we watch must be civilian in addition to military."

God grant we send you forth with skilled hands and consecrated hearts! God grant that wherever your future ministrations may lead you, whether among the Dutch, the Belgians, the Poles, the Greeks, the Filipinos, the Chinese, the Arabs, or among your own people in this great land of ours, may you serve as true ambassadors of healing, good will and understanding. May you learn, and by your deeds proclaim, an undeviating gospel of internationalism. May you re-learn, and reiterate, the abiding truth that all men are, and can become, brothers! Learn, and pass on the lesson, that nothing is properly foreign. All races, all creeds, all colors, all peoples constitute one land, one people who can, and must, learn to live amicably on this shrunken globe of ours. He who dines in Paris nourishes a brother philosopher in Cairo. The wail of a Chinese baby dying of starvation in Shanghai will shake to its depths the foundations of the Empire State Building!

You are girding your minds, and your bodies, to combat suffering, disease, starvation, despair which will be spread across the surface of this earth like a

festering blight. You will be called on to minister to men, and women, and children throughout the world, who have been maimed and wounded by every lethal agent known to humankind. Torn by bullets, poisoned by gas, shattered by bombs, blighted by hunger, seared by despair, ravaged by pestilence! And, mind you, you are also girding your arms for the battle for the peace, for the abiding peace which must follow this present holocaust, if mankind is to be spared extinction. In your hands of healing, in the depth of your understanding, in the width of your compassion, in the height of your self-abnegation, lies the hope of the world!

It is only by losing ourselves in issues not personal to ourselves—in other men's troubles, and sorrows, and in other men's joys—that we will ever find ourselves. It is only as our actions become farther and farther removed from motives of self-interest that we learn to spell the words kindness, loyalty, devotion, consecration, not with our lips, but with our hearts. The services of the physician to the patient, the services of the teacher to the student, (and remember, our primary interest in you is not whether you go through college. Rather, it is how much college goes through you) the services of the man of research to science, can never be expressed in terms of money. The hope of medicine lies in its remaining an outspokenly, unashamedly idealistic profession.

And let this be the star toward which you set your course through the shoals, the shallows, the storms, and the calms of medical school—full knowledge, sound judgment, highest skill, single minded devotion! And all poured forth daily throughout your lives at the service of other's needs.

"And make the council of thy heart to stand; for there is none more faithful unto thee than it. For a man's soul is sometime wont to bring him tidings; more than seven watchmen that sit on high on a watchtower."

The Permanent Values in Medicine*

(A Message from the Caduceus)

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In the heart of our capital city of Washington is now the National Gallery. In the center of this magnificent building is a fountain; and in the center of the fountain is a bronze statue of Mercury. This statue is a beautiful creation of the finest Italian art of three hundred years ago. Conspicuously displayed near the hand of the figure is the Caduceus. Thus we have in this center of American culture and art this ancient mystic symbol which, at a later time and in modified form, became the recognized emblem of the medical profession.

The title of this discourse has been announced as "The Permanent Values in Medicine." It might with equal propriety be stated as "A Message from the Caduceus," for this serpent figure has symbolized from the days of ancient Greece the enduring values, purposes and truths of medicine.

A classical story of old relates that Mercury one day found a tortoise shell and in this shell he made holes along the margins and strung fibers across, thus creating or inventing the lyre, said to be the first musical instrument. Mercury gave this lyre to Apollo, god of the muses and of the healing art. So pleased was Apollo that he, in return, gave to Mercury the Caduceus, ever after prized by Mercury in his far-flung excursions as the messenger of the gods.

Apollo evidently was the dispenser of the Caduceus, for he gave it to other gods; and notably to the venerable Aesculapius, the ideal physician of the ancient Greeks. Its purposes were said to be, in the case of Mercury and some of the other gods, to direct them in their extended flights in the skies and to protect them from danger and harm. As to Aesculapius, it was said not only to guide him to the sick but to protect him from the dangers of disease and epidemics. In more modern times this Caduceus of Aesculapius, consisting of a staff and a single snake, has come to be regarded throughout the world as the emblem of the medical profession. Recently the American Medical Association officially adopted it as such in this country.

The Caduceus is a winged staff, originally said to be an olive branch, with the serpent twined about it. Why the serpent? In a mystical sense it signifies a remarkable association of the serpent with medicine from the most ancient times. The serpent biologically is an early primitive animal form. It is a species which has been distributed widely on the earth for hundreds of millions of years and when man appeared a million years ago, more or less, serpents were already here. Both snakes and man then "groveled" about in the deserts, forests and jungles

*Commencement Address of the Class of 1943, University of Illinois College of Medicine, Chicago, March 26, 1943.

for long ages. They no doubt came to respect each other. The serpent was present in the Garden of Eden. Ancient biblical literature speaks of the "wisdom of the serpent." Early man seemed to have gained most by these associations. He used the snake for therapeutics, for medicines and poisons, for charms and sorcery, and for symbols in dances and in religious ceremonies.

In ancient and classic art serpents appeared in important rôles, as for example the Laocoön, the superb creation in sculpture of the Grecian period in which the writhing mass of reptiles and human beings was used by the artist to depict the ultimate in human suffering and pain.

Coming down to our own times the Caduceus concerns us intimately and directly. This class and the one preceding have adopted for class keys the true medical Caduceus, and since last night I stand before you wearing this class key which I am very proud to do. It concerns this class graduating today in other ways. Already many of you have taken an active part in creating a memorial to the permanence of medicine in the form of a statue of Apollo, to be erected at the site of the old College on Ogden Avenue at Congress Street in Chicago, where the first medical honorary society, Alpha Omega Alpha, was organized forty-one years ago. By so doing you are paying homage to medicine and are carrying on the best traditions of this ancient and honorable profession. You deserve the recognition due you for this enduring memorial. With you as contributors to this enterprise should be mentioned the national honorary society of Alpha Omega Alpha, and the artists who have been instrumental in promoting this project.

Another contingent of this class deserves a tribute. You will recall that Mercury created the lyre, the first musical instrument, and then gave it to Apollo. Thus from the very beginning even the gods recognized a relationship between music and medicine. And in our College this association has been promoted by the several musical clubs and the musical honorary society, Phi Mu Phi, to which many members of this class belong. As long as you young men and women live you will continue, I am sure, to value the culture, relaxation and enjoyment furnished by music and musical programs.

It is fitting here to direct attention to several other activities at the College which concern this ancient association of culture and medicine. The Medical Art Department, under Tom Jones, is organized as a group of artists who depict and illustrate medicine in a way to give to it artistic as well as professional value.

Medical alumni and alumnae through their gifts to the College of the statues of Aesculapius and Hygeia, assisted by the Federal government through the artists provided by the W.P.A. project, deserve our commendation and appreciation. The statue of Apollo already referred to will complete the group of the celebrated trio of the classical gods of medicine, namely, Apollo, Aesculapius and Hygeia. We will then possess in this medical center fine artistic creations of each.

There are several other well executed works of art about the grounds of the College, some of which were provided by the University and others by the State Department of Public Welfare.

The one in the west court at the fountain deserves a word of comment. For the last half century medicine has been passing out of the long period of high death rates in children. So appalling were these rates that this period has been referred to as the "Slaughter of the Innocents." To indicate the recent progress made in reducing infant mortality the statue in the west court was designed. It depicts a mother holding her infant away from the serpent, the latter symbolic in this case of infectious and preventable diseases. It may be called fittingly "the Rescue of the Innocents."

The collection of busts, reliefs, portraits and memorial plaques of notable men, including the founders of the College and eminent faculty members of former years, likewise deserves mention. The collection is now crowded into the library. These individuals were forceful personalities to whom all of us are happy to pay our respects and acknowledge our indebtedness.

The collections of old and rare books, manuscripts, instruments and museum items also should be mentioned. I refer especially to the Gehrmann collection of old books of historic value, the Pusey collection, the collection of the medical contributions of women, of the art work displayed in the museum of anatomy prepared by Dr. Kampmeier and Tom Jones, and the obstetrical collection prepared by Dr. Falls. It is unnecessary to emphasize that these items play an important role in medical education and in giving distinction to a medical institution.

But now we find ourselves in the midst of a great global war, a war surpassing in the destruction of culture and of living and dead things any catastrophe known to man. We hear on every hand that the world never again will be the same place in which to live, life will be different, medicine will be changed, et cetera. After such turmoil and devastation all of us are justified in repeating that old question: Whence and whither?

We well may wonder what messages from the ancient gods that wise serpent of the Caduceus might have for us at such times as these. When in dire difficulties we humans always have looked to the gods for help. Even Eddie Rickenbacker and his comrades, in the wide expanse of the Pacific, called to their God. Their lives were saved and now according to the press millions of people are praying to their Gods as never before. They are buying Bibles and reading religious books and going to church. People in this world are just like that.

The gods in their wisdom might tell us to be strong and brave and calm like Jupiter of old and to keep at least one foot on solid ground. Their emotions no doubt would manifest sympathy and pity, mingled with smiles of contempt and disappointment over our poor efforts to live and enjoy this earth which they, the gods, have provided for us.

In particular, the Caduceus, speaking for Aesculapius, might have much to contribute for medicine. I can imagine him speaking somewhat like this: Snakes and men have come through far greater catastrophes than this global war. Think of some of the great cosmic phenomena we have lived through. We survived great volcanic convulsions. We together migrated before the ice during the glacial periods. We survived the periods of the great floods. We lived together in caves

and among rocks for thousands of years. Think of what the stone snakes and stone men teach us. A few of them became fossilized to remain forever with us; thus, at least, approaching immortality. But just a moment. The report appeared in the press the other day that the Japanese have stolen the Peking man and other fossils, and here is another job before us to see to it that these priceless anatomic specimens be returned to the Peking Medical College in China.

He would say further: The stories of the qualities and virtues of the Greek gods of medicine; of Apollo, Aesculapius, Hygeia, Hippocrates and Herophilus will continue as the permanent and enduring epics for the medical profession, wars or no wars.

The Alexandrian libraries, nearly two thousand years ago, were devastated by marauders, quite as the Library of Louvain and Hunter Medical Museum in London were destroyed the other day. This was a catastrophe of the first magnitude and much medical knowledge was extinguished at a time before the printing of books was known. But today with our numerous libraries duplicated all over the world, it is far more difficult to extinguish knowledge.

The dark ages came and again much of value was extinguished which at one time might have been considered enduring. But the remote monasteries of the time and the Arabian philosophers kept the light burning for several centuries. Indeed, they made many actual contributions in that age, some of value to medicine even to this day.

The thirty years war which devastated the heart of Europe for more than a generation, the Napoleonic wars and other conflicts of great magnitude, too numerous to mention, all took their frightful toll of lives and knowledge. But, still, medicine was preserved and even flourished in spite of devastation. At times it seemed to feed on plague, famine and destruction.

The spirit of research and discovery has ever been a dominating influence in medicine and will continue to urge men onward and upward in their search for truth. This global war may retard but will not destroy that spirit.

Coming down to this present day the Caduceus might exclaim with satisfaction that at this very time greater progress in medicine is being made or is looming on the horizon, as it were, than ever before in history. Here are some examples of these problems just now exciting the imagination of both the medical and non-medical world: The biological chemistry of the viruses and their multiple relation to diseases; nutritional problems; cancer; nephritis; significant advances in methods of microscopic observation by electron and x-ray apparatus; preventive vaccination in typhus and yellow fever; control of malaria; distribution and control of the viruses of poliomyelitis and encephalitis in man and animals; the chemistry and therapeutics of the sulpha drugs whose application in diseases is so comprehensive as to be bewildering; the wide prevalence, distribution and control of mycoses; the dysentery problem; the products and poisons of fungi; the significance of the lower animals as reservoirs for the diseases of human beings; the prolongation of life to an extent that the relative increase of the aged is now presenting serious social and economic problems; the reduction of the incidence of

many diseases like tuberculosis, typhoid fever and smallpox; in some, to a degree approaching the vanishing point, thereby affecting decidedly the nature of the diseases physicians are called upon to treat. Here is a definite warning that much of the knowledge we are in possession of today will be outdated even before you young men reach the age of your greatest activity in medicine. So be prepared to become busy students as long as you practice medicine or you will be hopelessly antiquated in about five years' time.

It is interesting to see comments in the press and in war articles from time to time stating that the soldiers are now being rehabilitated so rapidly, especially by the use of sulpha drugs, as to tend to preserve the original size of the armies and hence prolong the war to that extent. And here Caduceus might put in this word: It reminds me of what old Pluto did once in the lower regions. When Doctor Aesculapius saved so many lives by his skill, Pluto complained to Jupiter that Hell was being depleted by this successful physician. So Jupiter, having a peeve to settle, struck down the good doctor with a thunderbolt. Later Jupiter repented of his act and to make amends took Aesculapius to the top of Mt. Olympus and there made a god of him. Let us hope he is still there and noting what is taking place in his native land of Greece today.

Caduceus rambles on: One of the very old ideas is that nations at times become abnormal as do individuals. Some become definitely diseased and require treatment and management accordingly. Manias, paranoias, insanities, phobias, temperaments, etc., are concerned and give rise to studies of the psychology of the mass and psychiatry of a people, a specialty, or what should be a specialty, in itself. The problem in such cases has ever been who is to apply the remedy. Who is to serve as the doctor?

We have this as a world problem before us today. Many contend it is a relative problem. All persons and all nations and peoples are to some degree abnormal, insane, maniacal, crazy in this way or that, or in certain matters. It has ever been so in the past. A nation or a group of peoples organize to effect control, management and cure by force, by extermination, by evolutionary change. Or we look for self-limitation to correct these mass defects and national blights.

Up to the present we have known of no rational or scientific method of treatment. So the pertinent problem looming up before the world more and more is not so much how to conduct war as how to maintain peace.

Once we have cured the patient, how shall we prevent the recurrence of the disease? In other words, the world has before it in the matter of war and peace what medicine has had before it and has now largely solved, namely, preventive medicine. The prevention of disease and the prevention of war are today the two great world problems. There are many things the lay world could learn from medicine in this regard were it so inclined. After all, medicine has been and will continue to be one long war against disease. We made little progress until we applied scientific preventive measures, which was little more than fifty years ago. The nations have come together and organized magnificently against the diseases of mankind and with effective results. For convincing evidence consult the world's

mortality and morbidity rates. Nothing comparable to it has happened before in history.

The way is pretty plain in this matter of war, be it against a pathogenic microbe or against a pathologic nation or people. As we have organized preventive medicine, we must organize preventive war. In medicine we do not talk about peace with the disease, with parasites, with the tubercle bacillus, for example. We do not propose to write a peace treaty with these causes of disease. We do not sit around a peace table with our disease-producing enemies. We wage continuously either an active or preventive war. We should have a continuous preventive war program fashioned along the lines of our continuous preventive disease programs.

It is an interesting fact that no wars of any significance have ever been waged over medical problems. People have fought over about every other problem imaginable. Wars over religion, over commerce, trade and industry, over boundaries, over races and sects, over royal and legal decrees, over social and economic questions, etc., but never over medicine. In fact, medicine has been throughout the centuries one of the great unifying agencies to bring the peoples of the earth together. About the only success accomplished by the League of Nations was that of the Health Division.

As we peer into the future now looming so ominously before us, may we not offer to this warring world the benefit of this experience of thousands of years in the contest with disease which in human suffering and destruction of life dwarfs completely all wars that are going on now or have occurred in the past.

I wonder if there will be a Doctor of Medicine present at the peace conference following this war. Doctors of Medicine have played important rôles under very similar circumstances; Dr. Benjamin Rush, for example, and others, in creating these United States and as signers of the Declaration of Independence. Let the spirit of Apollo and of his son, Aesculapius, prevail at peace tables rather than that of Mars and of Pluto.

In conclusion, may we note that out of the wisdom of antiquity the gods of medicine present to us the Caduceus, the embodiment of the eternal virtues of medicine; revealing to us permanent values which have come out of the unknown and distant past and which will remain as enduring as the very gods themselves; and offering to guide and guard future generations of the medical profession while pursuing its primary objectives, namely, the relief of suffering and the prolongation of human life.

The Caduceus is the banner of the medical forces fighting for the health of the world as the flag of our country is the banner of our armies fighting for the freedom of the world.

Today each member of this graduating class will receive a diploma from the University. May there go with it not only the authority of the proper officials of the University but also the authority of the Caduceus, symbolic of the virtues and truths of the profession, to guide you as you go forth into this world of turmoil and strife.

TENTATIVE PROGRAM
FOR THE
FIFTY-FOURTH ANNUAL MEETING
OF THE
ASSOCIATION of AMERICAN MEDICAL COLLEGES
TO BE HELD IN
CLEVELAND, OHIO
OCTOBER 25, 26 AND 27, 1943
Headquarters: Hotel Staller

*(The order of the papers as listed is subject to change.
The official program will give the proper order.)*

Address of the President.

W. S. LEATHERS, *Dean, Vanderbilt University School of Medicine.*

The Army Specialized Training Program.

GEORGE F. LULL, *Brigadier General, A. U. S., M. C., Assistant Surgeon General.*
FRANCIS M. FITTS, *Colonel, M. C., U. S. Army.*

The Navy V 12 Program.

BART F. HOGAN, *Commander, M. C., U. S. Navy.*

Can Excellence Be Learned?

ALAN GREGG, *Director Division of Medical Education, Rockefeller Foundation.*

The Place of the Small Community Hospital in Postwar Medical Education.

LESTER J. EVANS, *Medical Associate, The Commonwealth Fund.*

Some Aspects of Medical Education in Industrial Health Conservation.

CAREY P. McCORD, *Medical Director, The Industrial Health Conservancy Laboratories.*

Postwar Planning for Medical Education.

WILLARD C. RAPPEYE, M. D., *Dean, Columbia University College of Physicians and Surgeons, Chairman, Executive Council, Association of American Medical Colleges.*

Discussion opened by:

WILBUR C. DAVISON, *Dean, Duke University School of Medicine.*

A Recipe for a Medical School.

PHILIP A. SHAFFER, *Dean, Washington University School of Medicine.*

The Rohrschach Test.

M. B. HARROWER-ERICKSON, *Madison, Wisconsin.*

Present Methods of Medical Teaching.

JOS. T. WEARN, *Professor of Medicine, Western Reserve University.*

Correlation of Physiology Instruction with War Problems.

CARL J. WIGGERS, *Professor of Physiology, Western Reserve University.*

Tropical Medicine Fellowships of the John and Mary R. Markle Foundation.

HENRY J. MELENEY, *Professor of Preventive Medicine, New York University, Chairman, Committee of the Association of American Medical Colleges.*

Effect of the Accelerated Program of Medical Schools on the Curriculum, Faculty and Students.

VICTOR JOHNSON, *Associate Professor of Physiology, Dean of Students, University of Chicago.*

OPENING DATES OF 1943 AND 1944 SESSIONS OF THE MEDICAL COLLEGES OF THE UNITED STATES

(Figure after name indicates day of month)

1943

FIRST CLASS	DATE	SECOND CLASS	FIRST CLASS	DATE	SECOND CLASS
JANUARY					
Tennessee	1	March 22, July 8, September 23	New York Med. Coll.	29	
Indiana	7	September 4	APRIL		
FEBRUARY			Duke	1	
Mississippi	1	September 27	Louisville	1	
Dartmouth	7	October 31	Temple	1	
California	11	October 28	Cornell	5	
St. Louis	23	November 29	Hahnemann	5	
MARCH			Med. Coll. Va.	5	December 30
Johns Hopkins	1	November 29	New York Univ.	5	
Iowa	1		Pennsylvania	5	
Geo. Washington	1	November 22	Pittsburgh	5	
Marquette	1	October 25	Wayne	5	
Western Reserve	1	November 22	Yale	5	December 27
Harvard	8		Georgia	7	
South Dakota	8	December 6	Tufts	7	
Alabama	11	December 6	Maryland	8	
Louisiana	11		Jefferson	12	
Georgetown	15		Vermont	12	
Texas	15	November 1	Loyola	19	
Creighton	18		MAY		
Columbia	22		Oklahoma	10	
Cincinnati	22	December 13	Kansas	24	
Bowman Gray	22		JUNE		
Missouri	22	December 27	Howard	14	
North Carolina	22	December 27	Meharry	14	
Utah	22	December 27	North Dakota	14	
West Virginia	22	December 27	Stanford	28	
Emory	23		Illinois	28	
Nebraska	26		So. California	28	
Northwestern	29	December 28	JULY		
Virginia	29	December 29	Wisconsin	1	
Albany	29		Coll. Med. Ev.	1	
Chicago	29		Tulane	1	
Colorado	29		Syracuse	1	
Long Island	29		Arkansas	1	
Minnesota	29		Med. Coll. S.M.F.	5	
Oregon	29		Buffalo	6	
Rochester	29		Baylor	12	
Washington	29		AUGUST		
South Carolina	29		Woman's	30	
Ohio	30		OCTOBER		
Boston	31	December 31	Michigan	25	
Vanderbilt	29				

1944

FIRST CLASS	DATE	SECOND CLASS	FIRST CLASS	DATE	SECOND CLASS
JANUARY					
Columbia	1	October 2	Howard	25	
Chicago	2	October 1	North Dakota	27	
Tennessee	3	March 20, July 5, September 23	Med. Coll. S.M.F.	?	
Albany	3	October 2	APRIL		
Bowman Gray	3	September 27	Coll. Med. Evang.	1	
Colorado	3	October 2	Baylor	3	
Emory	3	October 2	Buffalo	3	
Georgetown	3	October 1	Arkansas	3	
Georgia	3	September 27	Syracuse	3	
Hahnemann	3	September 25	Illinois	12	
Harvard	3	October ?	Stanford	12	
Iowa	3	October ?	Wisconsin	?	
Long Island	3	October 9	MAY		
Oregon	3	October 6	Indiana	?	
Pennsylvania	3	October 2	JUNE		
Pittsburgh	3	October 2	Mississippi	1	
Rochester	3	September 29	California	29	
South Carolina	3	September 3	JULY		
Temple	3	October 2	Dartmouth	1	
Vanderbilt	3	September 20	Texas	1	
Vermont	3	October 4	Marquette	5	
Yale	3	October 1	Tennessee	5	September 23
Duke	3	September 29	AUGUST		
New York Univ.	3	October ?	Western Reserve	14	
Washington	3	October 2	St. Louis	28	
New York Med. Coll.	3	September 25	SEPTEMBER		
Loyola	3	October ?	Woman's Med. Coll.	1	
Creighton	4	September 25	Johns Hopkins	5	
Ohio	4	October 4	Cincinnati	5	
Cornell	5	September 28	Alabama	11	
Louisville	5	September 27	South Dakota	12	
Oklahoma	6	September 4	Virginia	25	
Tufts	5	October ?	Northwestern	25	
Jefferson	10	September 25	West Virginia	27	
Wayne	10	October 5	Boston	31	
Maryland	13	October 17	Utah	?	
Louisiana	?	October ?	Med. Coll. Va.	?	
Minnesota	?	September ?	Geo. Washington	?	
FEBRUARY			Missouri	?	
So. California	21	November 6	OCTOBER		
MARCH			Michigan	?	
Kansas	1	November 1	Nebraska	2	
Tulane	1	November 1			
Meharry	20				
Tennessee	20	July 5, September 23			

OPENING DATES OF COLLEGES HOLDING A SECOND SESSION IN 1943

MARCH

Tennessee	22
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JULY

Tennessee	5
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SEPTEMBER

Indiana	4
Tennessee	23
Mississippi	27

OCTOBER

Marquette	25
California	28
Dartmouth	31

NOVEMBER

Texas	1
Western Reserve	22
Geo. Washington	22
St. Louis	29
Johns Hopkins	29

DECEMBER

Alabama	6
South Dakota	6
Cincinnati	13
Missouri	18
Yale	27
West Virginia	27
Northwestern	28
Virginia	29
Med. Coll. Va.	30
Boston	31
North Carolina	?
Utah	?

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Association of American Medical Colleges

The fifty-fourth annual meeting of the Association of American Medical Colleges will be held in Cleveland, Ohio, October 25-27, 1943. Headquarters will be the Hotel Statler.

The program for the meeting will deal, in the main, with topics related to the war, such as the Army specialized training program, the Navy V 12 program, postwar medical education; preparation for the study of medicine; the place of the small community hospital in postwar medical education; teaching of tropical medicine; teaching of public health and preventive medicine and other related topics.

Since representatives of the Army and Navy training divisions will speak, it is to be expected that many, if not all, problems now bothering medical school administrators will be solved satisfactorily. These programs are well under way but some phases have not yet been worked out in their entirety. By the time of the meeting, an answer to all questions can be given by those who have to do with the administration of these educational programs. Therefore, it is important for all deans and other administrative officers of medical schools to attend this meeting. A cordial invitation to attend is extended to all those who are interested in medical education. Elsewhere in this issue the preliminary program for the meeting is presented.

* *

University of South Florida

An act to create a state university to be known as the University of South Florida, whose primary purpose shall be a school of medicine, a school of pharmacy and a school of dentistry was re-

cently passed by the legislature of Florida. The unit will be located in Jacksonville and maintained in operation with the Florida State Medical Association and the State Board of Health. Dr. Turner Z. Cason, Jacksonville, will be in general charge as director of the department.

* *

The 1942 Freshmen

All the medical colleges of the United States reported on 6,507 freshmen medical students for the 1942-1943 session. This exceeds the number of enrollment blanks received at the beginning of the year (6,339) by 168 students. The difference represents the repeaters for whom enrollment blanks were not made out because they were filed for the previous (1941) session.

The medical colleges began to increase the enrollment of freshmen students for the 1941-1942 session. For this session, the colleges reported the accomplishment of 6,420 freshmen. For the 1940-1941 session, the number of freshmen reported on was 5,961. Therefore, the increased enrollment for 1941 was 9.3 per cent, representing 459 students. For the 1942-1943 session, 87 more freshmen were reported on than for the 1941-1942 session—546 more freshmen than in 1940.

It is evident that the medical colleges have excelled in every way to help win the war. It must be recalled that so many more students increased the teaching load considerably even for normal times. For war time, it is cause for commendation that this extra teaching load was carried by a very much depleted teaching staff, and especially among the more experienced teachers. In some colleges this depletion has been alarming since nearly 50 per cent of the faculty

are in service. Teachers emeritus have come to the rescue in a few colleges; younger volunteers have helped out in others; even inexperienced teachers have helped to carry on. Then, too, the depletion was greatest among the teachers in the clinical years. The number of residents, who have always helped in the teaching, has been reduced. But readjustments have been made; the work has gone on and to good purpose and with good results. True, the strain of acceleration is being felt, both by students and faculty—but everybody concerned with the entire program is doing his level best to help and to keep the ball rolling. We must hold out and carry on.

* *

The 1943 Freshman Classes

The enrollment blanks for the 1943 freshman classes have been received from all but six of the medical colleges of the United States. They number 6,127. Two of the colleges not reporting admit students only once a year, in the Fall. One college admits students every three months. Three colleges—one admitting in March—have not yet sent in their blanks. Computing the admissions for these six colleges on the basis of admissions for the preceding year, they will total 518, which will bring the total for all colleges to 6,645. To this number must be added the repeaters for whom new enrollment blanks are not submitted. Assuming that the number of repeaters not reported will be the same as in the preceding year, the freshman classes will number 6,797 or 306 more than for the 1942-1943 session. However, it must be pointed out that one new medical school is included in this count and one non-approved college. Therefore, it is probable that the num-

ber of freshmen students for the present session will be considerably larger than it was for the preceding session. It is evident that the medical colleges have continued to accept the larger number of students as recommended by the Association of American Medical Colleges early in 1941 long before the war was imminent or, at least, before it was begun.

* *

Centenary of the School of Medicine Western Reserve University

Immediately following the annual meeting of the Association of American Medical Colleges, Western Reserve University will celebrate the One Hundredth Anniversary of the School of Medicine on Wednesday, October 27, 1943. The program is as follows:

- 11:30 A. M. "Blood Plasma Proteins. Their Production, Function, Substitution and Replacement"—George H. Whipple, M.D., Sc.D., LL.D., Professor of Pathology and Dean of School of Medicine and Dentistry, University of Rochester. Auditorium of Cleveland Medical Library Association.
- 12:30 P. M. Buffet luncheon for delegates and guests. Supper room of Cleveland Medical Library Association.
- 3:00 P. M. University Convocation.—Severance Hall. Address: "The Matrix of Medicine"—Alan Gregg, M.D., Director for the Medical Sciences, Rockefeller Foundation.
- 7:00 P. M. Dinner at Hotel Statler. Address: "The Crimson Thread"—Reginald Fitz, M.D., Lecturer on the History of Medicine, Harvard University Medical School.

College News

University of Minnesota Medical School

A new annual appropriation was made by the State Legislature of \$15,000 for special research in the field of cancer. A continuation of the grant of \$10,000 a year was made by the Citizens Aid Society in support of cancer research and the program of cancer education. The annual gift of \$5,500 by the Citizens Aid Society in support of the George Chase Christian Professorship in Cancer Research was continued. A grant of \$5,000 from the Jane Coffin Childs Memorial Fund for Medical Research has been made for the support of the work of Dr. John J. Bittner and Dr. Robert G. Green and associates in the Departments of Physiology and Bacteriology on the nature and mode of action of the milk influence in mammary cancer. A grant of \$3,500 a year, for a two-year period, has been made by The Commonwealth Fund of New York toward the support of the Psychiatric Clinic for Children. Toward the support of this Clinic the Stevens Avenue Home of Minneapolis will continue their grant of \$10,000 for the year beginning July 1, 1943. The Medical School has accepted a grant of \$3,000 from Parke, Davis and Company, to establish a Fellowship in Clinical Hematology in the Department of Anatomy, under the supervision of Dr. Hal Downey.

Dr. J. C. McKinley, Head of the Department of Medicine and Director of the Division of Nervous and Mental Diseases, has been named Head of the newly established Department of Neuropsychiatry, which includes the Divisions of Adult Psychiatry and Child Psychiatry. Dr. Cecil J. Watson has been named Head of the Department of Medicine and Director of the Division of Internal Medicine. Dr. Raymond N. Bieter, Professor of Pharmacology, has been appointed to the Headship of the Depart-

ment of Pharmacology to succeed the late Dr. Arthur D. Hirschfelder.

Promotions: Dr. Harold A. Whitaker, to Clinical Professor of Preventive Medicine and Public Health; Dr. Ralph T. Knight, to Clinical Professor of Anesthesia; Dr. Wallace D. Armstrong, to Professor of Physiological Chemistry. The promotions of Dr. Clarence Dennis, to Associate Professor of Surgery; Dr. N. Logan Leven, to Clinical Associate Professor of Surgery; Dr. Charles E. McLennan, to Associate Professor of Obstetrics and Gynecology; Dr. Charles E. Connor, to Clinical Associate Professor of Ophthalmology and Otolaryngology; Dr. Joseph T. Cohen, to Clinical Associate Professor of Pediatrics; Miss Ruth B. Freeman, to Associate Professor of Preventive Medicine and Public Health; Mr. George O. Pierce, to Associate Professor of Preventive Medicine and Public Health; Dr. Edward A. Regnier, to Clinical Associate Professor of Surgery; Dr. Thomas J. Kinsella, to Clinical Associate Professor of Surgery; Dr. Frank W. Whitmore, to Clinical Associate Professor of Neuropsychiatry; Dr. Frederick W. Hoffbauer, to Assistant Professor of Medicine; Dr. Thomas Lowry, to Clinical Assistant Professor of Medicine; Dr. Alphonse Walch, to Clinical Assistant Professor of Medicine; Dr. James K. Anderson, to Clinical Assistant Professor of Surgery; Dr. Willard D. White, to Clinical Assistant Professor of Surgery; Dr. Hewitt B. Hannah, to Clinical Assistant Professor of Neuropsychiatry.

* * *

Medical College of the State of South Carolina

Under its accelerated program the Medical College held its first March graduation of medical students and nurses on the 19th of that month. There was a roll of some ninety graduates receiving diplomas in the two schools.

George D. Grice, acting president of the College of Charleston, delivered the annual address. Dr. F. Macnaughton Ball was the winner of the Ravenel award for the best thesis on a public health subject. Later his paper appeared in the May issue of the *Journal of the South Carolina Medical Association*.

By action of the faculty at its annual meeting Wednesday, June 2, 1943, Dr. Paul W. Sanders, associate in urology, was advanced to the rank of assistant professor; Dr. Robert M. Hope, associate in ophthalmology, rhinology and otolaryngology, was advanced to assistant professor; Dr. J. M. Settle was advanced to the rank of associate in obstetrics and gynecology; Mr. J. A. Richardson was advanced to the position of instructor in physiology and pharmacology; Dr. Morris Belkin was advanced to the position of associate in pharmacology; Dr. B. O. Ravenel was advanced to the position of associate in pediatrics; Dr. D. L. Maguire, Jr., was appointed teaching fellow in surgery, and Mr. J. B. Sanford was appointed technical assistant in bacteriology.

Between June 12 and July 1, a recess was granted to the medical students before the Army and Navy students were called to active duty. When the students returned from Fort Jackson at Columbia on July 9 they were in the uniform of the Army; the Navy group will be uniformed in two or three weeks.

Dr. Daniel W. Ellis, associate in the Department of Clinical Pathology, attended the Army Medical School in Washington, July 3 through August 28, for a course in Tropical Medicine.

The Second Annual Refresher Course sponsored by the Alumni Association is planned for November 3 and 4, 1943. Speakers who have accepted places on the program are: Dr. Leroy Gardner, Director, Trudeau Foundation of the Saranac Laboratory for the study of Tuberculosis; Dr. Alfred Blalock, Professor of Surgery, Johns Hopkins University; Dr. Roy Kracke, Professor and Chairman of the Department of Bacteriology, Pathology and Laboratory Diagnosis,

Emory University; Dr. Charles Christian Wolfert, Professor of Clinical Medicine, University of Pennsylvania; Dr. Virgil P. Sydenstricker, Professor of Medicine, University of Georgia; Colonel John Theodore King, Chief of the Medical Clinic at Walter Reed Hospital; Dr. Harrison F. Flippin, Department of Medicine, University of Pennsylvania; Dr. George W. Thorn, Hersey Professor of the Theory and Practice of Physic, Harvard University.

The course will be given for two days, with a different program for each day. Each speaker will give a morning clinic or lecture and conduct a round table discussion in the afternoon. A pathological conference will be held on both afternoons.

Founder's Day Speaker at Banquet, evening of November 4th, 1943: Dr. Henry Meleney, New York University, Chairman of Committee on Teaching of Tropical Medicine of the Association of American Medical Colleges.

The retirement announced of Dr. Robert S. Cathcart, professor and head of the department of surgery, and Dr. John van de Erve, head of the department of physiology. Both have reached the retirement age and will become professors emeritus. Dr. Frederick E. Kredel, professor of surgery, has been named acting head of the department.

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Long Island College of Medicine

To meet the continued wartime need for a general training course for physicians engaged in or desiring to enter industrial practice, the Long Island College of Medicine has announced its second intensive postgraduate course in industrial medicine to be given in Brooklyn during the first two weeks of November. The course is modeled on the first series of lectures and seminars in this field presented by the College in November, 1942, in which fifty-nine matriculants from six states enrolled. Enrollment this year will be limited to fifty matriculants for the full course. The course is designed for physicians

but a limited number of others will be permitted to attend the sessions as auditors.

The course will run from November 1 to November 12. It will consist of afternoon and evening lectures at the College and morning clinics in the medical departments of nearby industrial plants. The lectures will be given by leading industrial physicians and members of the College faculty. The course is under the auspices of the Department of Preventive Medicine and Community Health and is directed by Dr. Thomas D. Dublin, associate professor. Following the completion of the course, additional supervised training in the medical department of selected industrial concerns will be provided for those of the matriculants who desire further practical work.

Five of the matriculants enrolled in 1942 elected to take a month of supervised training, and four matriculants were aided by the College in finding industrial positions. Thirty-five of last year's matriculants were physicians of whom seventeen were in full time industrial practice.

Assisting Dr. Dublin in the formulation and development of the course are Dr. Cassius H. Watson, Medical Director of American Telephone & Telegraph Co., alumnus and trustee of the College, Dr. John J. Wittmer, Medical and Personnel Director of Consolidated Edison Co., an alumnus, and Alfred R. Crawford of the College's Department of Administration. Thirty-seven lecturers will take part in the sessions. A series of clinical and laboratory demonstrations at the College is planned.

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New York University College of Medicine

Appointments: Dr. James Leroy Wilson, Professor of Pediatrics and Chairman of the Department; Dr. Margaret A. Kennard, Assistant Professor of Anatomy (Neuroanatomy and Neurophysiology) and Assistant Professor of Neuropsychiatry; Dr. Arthur Edward Gold-

farb and Dr. John Cooper Graham, Assistant Clinical Professor of Dermatology and Syphilology; Dr. Richard Townley Paton and Dr. David Henry Webster, Clinical Professor of Ophthalmology; Dr. David J. Impastato, Assistant Clinical Professor of Psychiatry. Promotions: Dr. William Leifer and Dr. H. Victor Mendelsohn, Assistant Clinical Professor of Dermatology and Syphilology; Dr. David P. Earle, Jr., Assistant Professor of Medicine; Dr. Bernhard Dattner, Associate Clinical Professor of Neurology; Dr. Frank C. Keil, Dr. W. Guernsey Frey, Jr., and Dr. Ervin A. Tusak, Clinical Professor of Ophthalmology; Dr. Donald Bogart, Dr. Bernard Fread and Dr. Isadore Givner, Assistant Clinical Professor of Ophthalmology; Dr. Blandina Worcester, Assistant Clinical Professor of Pediatrics; Dr. Maxwell H. Poppel and Dr. Henry K. Taylor, Assistant Professor of Clinical Radiology.

August 9th, Major General James C. Magee, former Surgeon General of the Army, who has recently returned from a trip to the troops in England and North Africa, delivered a lecture to the faculty and students of New York University College of Medicine on military medicine with special reference to tropical diseases.

* *

Indiana University School of Medicine

The appointment of William Headlee, Ph.D., as assistant professor of parasitology marks the introduction of a new program for the study of tropical medicine at the school. The launching of the program follows a recommendation of the Association of American Medical Colleges. In making the announcement Dr. Willis D. Gatch, dean of the medical school, explained that the step had been taken, first, to prepare the future army and navy physicians now being trained in the Army Medical School for service in the tropical regions and, second, as a precaution against the introduction of rare tropical diseases in the United States.

Tufts College Medical School

On July 4 Miss Frances Stern, chief of the food clinic of the Boston Dispensary, Boston, observed her seventieth birthday. To commemorate this event a fund has been established to be used by her to extend the research and educational activities of the clinic. A department of nutrition will be set up and staffed by selected members of the faculty for the duration of the war with the hope that later a full professor of nutrition may be installed. The food clinic at the dispensary has been named the Frances Stern Food Clinic to honor further the woman who established it twenty-five years ago. The clinic is said to be the first of its kind and was established in 1918. After her return from Paris, where she had been head worker of *Pour l'Enfance et la Famille par l'Aide Sociale*, which had been carrying on the service begun by the American Red Cross, the food clinic became the main concern of Miss Stern. The plans in her honor are being carried on by the Frances Stern Seventieth Birthday Fund begun by many of her friends. Judge A. K. Cohen, president of the Jewish Philanthropies, is chairman. In 1908 Miss Stern was assistant to Mrs. Ellen H. Richards, first woman student and teacher at the Massachusetts Institute of Technology and founder of the American Institute of Home Economics.

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Tulane University School of Medicine

Dr. Erwin E. Nelson, since 1937 professor and head of the department of pharmacology, has been appointed director of research of the Burroughs Wellcome & Company (United States) experimental research laboratories at Tuckahoe, N. Y.

Dr. Ralph G. Smith, associate professor of pharmacy, University of Michigan Medical School, Ann Arbor, has been appointed professor of pharmacology and head of the department.

On July 14 the College of Physicians of Philadelphia awarded its Alvarenga Prize to Ernest C. Faust, Ph.D., pro-

fessor of parasitology and acting head of the department of tropical medicine at Tulane University of Louisiana School of Medicine, New Orleans, for his "outstanding contribution to our knowledge of parasitology and tropical medicine." This prize was established by the will of Pedro Francisco Da Costa Alvarenga of Lisbon, Portugal, an associate fellow of the College of Physicians, to be awarded annually by the College of Physicians on each anniversary of the death of the testator, July 14, 1883, to the author of the best memorial on any branch of medicine which may be deemed worthy of the prize.

* *

University of Alabama School of Medicine

"The Medical College of Alabama" will be established under a bill recently signed by the governor which appropriates a million dollars for land, buildings and equipment and \$366,750 for each of the fiscal years ending Sept. 30, 1944 and Sept. 30, 1945. The governor is to appoint a building commission to select a site for the school, which will operate as a part of the University of Alabama, University. The bill also authorized the creation of a "Physicians Advisory Board," consisting of five physicians who shall be members in good standing of the state medical association and shall reside in different sections of the state. This board will cooperate with the commission in its activities toward the construction of the school. The bill provides that the board of trustees of the University of Alabama is authorized to establish a scholarship for each county in the state in the amount of \$400 a year for the benefit of one resident of each county, payable from the annual state appropriation to the school of medicine.

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College of Medical Evangelists

Dr. Harold Shryock, assistant professor of anatomy, will be acting dean at Loma Linda until Dr. Newton G. Evans, recently appointed dean, will move from Los Angeles to Loma Linda.

Meharry Medical College

"Letters of Intent" have been signed by the Administration of the College for A.S.T.P. units in medicine and dentistry. These units officially began their courses of study on June 14th although the students were not called to Fort Benning, Georgia, for final processing until July 1st. At this time 239 students in medicine and dentistry who had been inducted into the ERC have been called to Fort Benning for the final processing and will return as fully activated A.S.T.P. students.

The institution has been most fortunate in having Lt. Col. Jules V. Sims assigned as the Commandant of the Meharry A.S.T.P. units. Lt. Colonel Sims has had considerable experience with military units in colleges and thoroughly appreciates and understands the administrative problems of the college as well as those of his command. Consequently the matter of co-operation and adjustment between the College and the Army has been greatly facilitated. The administration anticipates that the programs of the College and the Army will function smoothly and successfully.

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University of Texas Medical Branch

The fifty-third graduation exercises scheduled for Saturday, July 31, were canceled because of the damage caused by a tropical storm. Degrees were conferred on August 2 just prior to the beginning of the state board examinations and diplomas were presented August 4 at an informal meeting at which Dr. Witten B. Russ, San Antonio, spoke on "The Doctor and the Postwar World."

Dr. Eric Ogden, associate professor of physiology at the University of California Medical School, Berkeley, has been appointed professor of physiology and clinical physiologist at the John Sealy Hospital.

Mrs. F. W. Wozencraft, Washington, D. C., has presented a fund to establish a lectureship in ophthalmology at the University of Texas Medical Branch,

Galveston, in honor of her father, Dr. John O. McReynolds, who died on July 7, 1942.

* *

University of Cincinnati College of Medicine

A public campaign to raise at least \$300,000 to be donated to the College of Medicine as a fund dedicated to the memory of Dr. Mont R. Reid was launched on July 12 under the auspices of a local committee of sponsors. The fund is to be used to supplement the regular budget of the college of medicine and is intended "to honor the memory of a great citizen, to advance the cause of medical science and teaching and to promote the health of our community." An annual deficit varying from \$18,000 to \$25,000 was usually met through the personal efforts of Dr. Reid and it is believed that a fund to insure the activities of the department will be a suitable memorial in his honor.

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University of Maryland School of Medicine

The Board of Trustees of the United States Pharmacopoeia have awarded to the Department of Pharmacology \$2,500 for the continuation of Pharmacopoeial work in this department. The standardization of digitalis will be given special study.

The Ohio Chemical and Manufacturing Co. of Cleveland, Ohio, has awarded to the Department of Pharmacology \$4,000 to continue researches which are in progress here on volatile anesthetics. This is the sixth grant awarded this department by the Ohio Chemical and Manufacturing Co.

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University of Missouri School of Medicine

The \$125,000 appropriation amendment to House Bill 417 for the establishment of the last two years in Kansas City was defeated June 28 by a Senate vote of 17 to 16. A motion to reconsider the amendment was defeated.

Jefferson Medical College

Dr. Paul C. Swenson, associate professor of radiology at the Columbia University College of Physicians and Surgeons, New York, has been appointed professor of roentgenology at Jefferson Medical College of Philadelphia and Dr. James Rudolph Jaeger, assistant professor of surgery (neurosurgery), University of Colorado School of Medicine, Denver, has been appointed professor of neurosurgery. Other appointments to Jefferson include those of Dr. William G. Sawitz, assistant professor of parasitology; Dr. Joseph Stasney, assistant professor of pathology, and Dr. Francis M. Forster, assistant professor of neurology.

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*University of California
Medical School*

Friends and associates of Dr. Esther Rosencrantz, associate professor of medicine, gave a dinner at the Palace Hotel, San Francisco, July 9, to mark her retirement from the university, where she had been a member of the staff since 1913. Dr. Rosencrantz was also lecturer in medical history and bibliography in the medical school. A collector of the works of Sir William Osler, whose pupil she was at Johns Hopkins University School of Medicine, Baltimore, Dr. Rosencrantz was presented at the dinner with six rare Osler items. She has given her entire collection to the medical school.

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*Western Reserve University
School of Medicine*

New appointments: Dr. J. Paul Quigley, professor of gastro-intestinal physiology and Dr. Edward Muntwyler, professor of experimental biochemistry. During recent years the investigations of Dr. Quigley have involved chiefly the determination of intralumen pressures in the digestive tract, the mechanism of gastric evacuation, and pyloric sphincter behavior. Dr. Muntwyler has studied salt and water metabolism, especially in experimental adrenal cortical insufficiency and intestinal obstruction.

*University of Rochester
School of Medicine*

The University ultimately will receive an estimated \$1,784,275 for use as a research fund under the will of Mrs. Bertha H. Buswell, Buffalo. The will directed that the money be used to establish the "Bertha H. Buswell and Dr. Henry C. Buswell Memorial" for research by the department of internal medicine in the school of medicine. The amount represents the residue of the estate and is subject to a life interest by Mrs. Buswell's brother. The late Dr. Buswell bequeathed \$900,000 for the use of the department of urology in the medical school.

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*University of Toronto
Faculty of Medicine*

Medals, scholarships and prizes awarded: Cody Gold Medal, Tauber, A. S.; Cody Silver Medal, Smith, H. A. W.; Routley, E. F.; The William John Hondry Memorial Scholarship in Obstetrics and Gynecology, Boyd, D. M. (Aeq.) and Forgie, Miss M. J. (Aeq.); Chappell Prize in Clinical Medicine, Routley, E. F.; Ontario Medical Association Prize in Hygiene and Preventive Medicine, Routley, E. F.; David Dunlap Memorial Scholarships: Sixth Year, Harvey, J. E.; Fifth Year, Spaulding, W. B.; R. S. Saddington Medal in Pathology, Basmajian, J. V.

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*Louisiana State University
School of Medicine*

Dr. Donald Duncan, Professor and Head of the Department of Anatomy, at the University of Buffalo School of Medicine, has been appointed Professor of Anatomy. He holds a Ph.D. degree in anatomy from the University of Minnesota and is the author of numerous publications chiefly in the field of neurology. He was formerly Assistant Professor of Anatomy at the University of Utah, and Professor of Anatomy at the University of Texas School of Medicine. Dr. Duncan will report for duty at the Medical School on October 1.

*Yale University
School of Medicine*

Promotions: William U. Gardner, Ph.D., assistant professor of anatomy at Yale University School of Medicine, New Haven, has been appointed professor of anatomy and chairman of the department. He succeeds Edgar Allen, Sc.D., who died on February 5 while on active duty with the U. S. Coastguard Reserve. Dr. Harry S. N. Greene, associate professor of pathology and surgery at Yale, has been named professor of pathology.

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*Northwestern University
Medical School*

Promotions: Drs. Mark T. Goldstine to professor of obstetrics and gynecology, Garwood C. Richardson to assistant professor of obstetrics, William B. Serbin to assistant professor of obstetrics, George L. Apfelbach to associate professor of bone and joint surgery, Earl O. Latimer to assistant professor of surgery and George K. Yacorzynski, Ph.D., to assistant professor of nervous and mental diseases.

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*University of North Carolina
School of Medicine*

Dr. William deB. MacNider, Kenan research professor of pharmacology and head of the department, will relinquish his responsibilities as head of the department on September 1. He will continue in the department as research professor. Dr. Grant L. Donnelly has resigned as associate professor of pharmacology in order to resume the practice of medicine.

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*University of Colorado
School of Medicine*

Dr. Phillip Work recently resigned as professor of neurology and head of the department. Dr. Work is now a lieutenant colonel in the Medical Corps of the Army. Dr. Clough T. Burnett has resigned as associate professor of medicine.

*Washington University
School of Medicine*

Dr. Herbert S. Breyfogle, a fellow in legal medicine at Harvard Medical School, Boston, has been appointed instructor in pathology and pathologist to the St. Louis City Hospital. He will serve also as pathologist to the coroner of St. Louis County.

Dr. Carlyle F. Jacobsen, professor of medical psychology, has been appointed assistant dean.

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*University of Mississippi
School of Medicine*

The School has received a gift of \$2,500, with a like amount to be added in 1944, for the establishment of the G. D. Shands Memorial Loan Fund for medical students. The fund is available to worthy students completing the two years' course and who need financial aid to finish their medical training at other schools.

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*Vanderbilt University
School of Medicine*

Dr. Amos Christie, professor of pediatrics, University of California Medical School, has been appointed professor and head of the department of pediatrics, succeeding the late Dr. Horton Casparis. Dr. Christie will enter on his duties about October 1st.

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*George Washington University
School of Medicine*

Dr. Joseph T. Roberts, formerly assistant professor of medicine and anatomy, University of Texas School of Medicine, has been appointed adjunct professor of clinical medicine.

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*Loyola University
School of Medicine*

Dr. J. Glenn Powers, assistant dean, has resigned. He will be succeeded by Dr. Stewart C. Thomson, a graduate of Loyola, 1936, and a member of the department of anatomy ever since.

*Baylor University
College of Medicine*

Baylor now occupies quarters in Houston, the equipment from Dallas having been installed in a large building formerly used as a Sears Roebuck retail store. Houston physicians are cooperating in the teaching facilities, and clinical accommodations are available through the Jefferson Davis Hospital, a city-county unit of 500 beds, and the Hermann Hospital of 240 beds. The new school has eighty-four students in its freshman class. The upper classes are smaller. Baylor has Army and Navy contracts, and all of the Navy students who were in Dallas have been ordered to the Houston school.

Recent appointments to the faculty include that of Dr. James A. Greene, associate professor of theory and practice of medicine, State University of Iowa College of Medicine, Iowa City, who has been named professor and chairman of the department of medicine and dean of the clinical faculties. Baylor University College of Medicine was first organized in Dallas in 1900 as the University of Dallas Medical Department. In 1903, assuming its present title, the school became the medical department of Baylor University at Waco. In 1904 it acquired the charter of the Dallas Medical College and in 1918 absorbed the Fort Worth School of Medicine. Dr. Walter H. Moursund Sr. is dean of Baylor.

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*Medical School
Southwestern Medical Foundation*

It is announced that the school is now occupying prefabricated buildings which will house all the preclinical departments, providing laboratory space, offices for the department personnel, room for technicians. The school has been occupying temporary quarters in the Allen Spence Junior College. The department of bacteriology has been housed in the Southern Methodist University. Many additions to the preclinical faculty have been made. The clinical faculty is the same as functioned in like manner for Baylor University College of Medicine.

*Marquette University
School of Medicine*

Gold keys and certificates for twenty-five or more years of service were recently presented to the faculty. Dr. Eben J. Carey, dean of the medical school, was toastmaster. Four of those honored had served the medical school since its organization in 1912. They are Henry L. Banzhaf, D.D.S., and Drs. Matthew N. Federspiel, Chester A. Kissinger and Simpson M. Markson. Other faculty members honored included Drs. Edward F. Barta, Charles J. Coffey, Charles Fidler, Harry J. Heeb, Samuel G. Higgins, Joseph Lettenberger, Francis B. McMahon, Herbert W. Powers, Louis F. Ruschhaupt, James C. Sargent, Frederick A. Stratton and Joseph C. Bock, Ph.D. In addition to faculty members several staff members of the school were also honored.

Dr. Ervin T. Huber, St. Louis University School of Medicine, gave the first in an annual series of letters on medico-moral problems recently. The lecture series, named after the Jesuit medical missionary René Goupil, is intended to provide physicians with an insight into moral and religious problems in practice.

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*Cornell University
Medical College*

Dr. McKeen Cattell, associate professor of pharmacology in charge of the department, has been promoted to professor of pharmacology and head of the department. Dr. John M. McLean has been promoted to professor of clinical surgery (ophthalmology).

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*University of Vermont
College of Medicine*

Dr. Louis B. Goodman of Yale University Medical School, has been appointed professor and chairman of the department of pharmacology and physiology, succeeding Dr. Donald Slaughter, resigned.

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Hahnemann Medical College

The college has been designated as an institution to which medical officers will be assigned for training in anesthesia.

General News

American Foundation for Tropical Medicine, Inc.

For the six month period ending June 30, 1943, twelve grants amounting to \$43,680 were made by the American Foundation for Tropical Medicine, Inc., to eleven North American medical schools, a scientific journal and the Army Medical Museum. These grants, made possible by contributions and pledges for the current year of \$66,600 by twenty-one American corporations, are being used to strengthen teaching and research programs in tropical medicine and parasitology at the various schools. The approved projects were selected by the medical committee among a number of applications.

Medical schools to receive grants during the period from April 1 to June 30 were: Cornell University Medical College, Duke University School of Medicine, University of Pennsylvania School of Medicine and Stanford University Medical School. The Journal of Parasitology was also aided. Schools of medicine to which grants were made available during the first quarter of 1943 were: New York University College of Medicine, Tufts College Medical School, Tulane University School of Medicine, University of Manitoba Faculty of Medicine, University of Nebraska College of Medicine and Yale University School of Medicine.

Companies which have made contributions or formal pledges of support include: Abbott Laboratories; American Cyanamid Company; Ciba Pharmaceutical Products Corp.; Firestone Plantations Company; General Foods Corporation; Hoffmann-La Roche, Inc.; The Lambert Company; Lederle Laboratories; Eli Lilly and Company; Merck & Co., Inc.; National Carbon Company; Parke, Davis and Company; E. R. Squibb & Sons; The Texas Company; United Fruit Company; William R. Warner & Company; Winthrop Chem-

ical Company; Winthrop Products, Inc.; and John Wyeth & Brother. The Foundation acted as the administrative agency for a special grant from the John and Mary R. Markle Foundation.

The officers of the Foundation are: President, Lt. Col. Thomas T. Mackie, Executive Officer, Division of Parasitology and Tropical Medicine, Army Medical School; Vice President, Dr. Willard C. Rappleye, Dean, College of Physicians and Surgeons, Columbia University; Secretary, Mr. Alfred R. Crawford, Assistant to the President, Long Island College of Medicine; Treasurer, Mr. W. W. Lancaster, Partner, Shearman and Sterling; and Executive Director, Dr. J. A. Curran, President and Dean, Long Island College of Medicine. Members of the Executive Committee, in addition to the above officers, are: Dr. Theodore G. Klumpp, President, Winthrop Chemical Company, Inc., and Dr. Henry E. Meleney, Professor of Preventive Medicine, New York University College of Medicine.

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Fellowships in Health Education

Fellowships in health education for training at Yale University, the University of Michigan and the University of North Carolina have been announced by the United States Public Health Service. These fellowships have been made possible by the W. K. Kellogg Foundation, Battle Creek, Mich., through a grant to the United States Public Health Service. Twenty-six young women are now enrolled in the School of Public Health at the University of North Carolina working for their master's degree in public health. The additional fellowships will be awarded for the fall term beginning this September. Basic requirements for application include a B.A. or B.S. degree from an accredited university with major emphasis in the medical and social sciences and education. The suc-

cessful completion of a year's work leads to a master's degree in public health. Interested and qualified persons must submit their applications to the Surgeon General of the U. S. Public Health Service not later than September 4. Announcement of the successful candidates will be made on September 7.

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Medical Service and Public Relations

The American Medical Association has appointed a Council on Medical Service and Public Relations. The Council consists of ten members, four being officers of the American Medical Association, the president, the immediate past president, the secretary and a member of the Board of Trustees. The remaining six members represent the states of New York, Oregon, Minnesota, Missouri, Ohio and Tennessee. The representative from Tennessee is Dr. W. S. Leathers, president of the Association of American Medical Colleges, although not representing the Association on the Council. Like the others, he is an individual member.

The functions of the Council are defined by the House of Delegates: to collect data, to give information, to investigate, to study and to suggest with respect to timely and adequate rendering of medical care to the American people. The Council will cooperate with the Board of Trustees and various agencies of the American Medical Association.

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Fund for Psychiatric Aid to Children

The Loren B. T. Johnson Memorial Fund has been established by Mrs. David S. Barry, Jr., in honor of her father. The \$25,000 trust fund will be used for "the intensive and specialized care and treatment of children in connection with the special objectives of the Washington Institute of Mental Hygiene." Dr. Johnson, who died in December, 1941, helped organize the Washington Child Guidance Clinic and the Life Adjustment Center, which were later merged to form the Washington

Institute of Mental Hygiene, now supported by community chest funds. Dr. Winfred Overholser succeeded the late Dr. Johnson as president of the mental hygiene institute.

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National Foundation for Infantile Paralysis

Twenty-eight grants, totaling \$354,370, have been made by the Foundation to universities, hospitals, laboratories and other organizations in eleven states to continue the fight against the disease. Sixteen grants, totaling \$216,020, were made for virus and after-effects research. Four of these are on long term projects being conducted at Yale University, Johns Hopkins University, University of Michigan and University of Wisconsin. Twelve grants, totaling \$138,350, were made for various educational programs including the training of technicians in the Kenny method of treatment. Some of these grants include projects for educational work for physicians and the public. The sum of \$2,500 was appropriated for the preparation of a complete bibliography on poliomyelitis. The compilation is being done for the Foundation with the aid of the library of the American Medical Association and the John Crerar Library, Chicago.

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Postgraduate Assembly of the Institute of Medicine of Chicago

A Postgraduate Assembly on Nutrition in Wartime will be held on Wednesday and Thursday, November 17 and 18, 1943, in the Palmer House, Chicago, and will be devoted to phases of nutrition that are of particular interest to practicing physicians, dentists, nutritionists, and dietitians at this time. There will be no fees of any kind and all members of the above professions in Chicago and the Midwest are invited to register.

The Assembly will present a carefully integrated program which will include five addresses on each of two mornings and on one afternoon; six panel discussions on the afternoon of the second day; a "Nutrition Information Please" pro-

gram on the first evening; and the First William Hamlin Wilder Memorial Lecture by Dr. Russell M. Wilder, Chief, Civilian Food Requirements Branch, War Food Administration, Washington, on the evening of the second day. A complete program and registration blank can be secured by addressing: The Institute of Medicine of Chicago, 86 East Randolph Street, Chicago 1, Illinois.

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Bevan Bequest to Surgical Fund

The will of the late Dr. Arthur D. Bevan provides for a bequest of \$5,000 to the Trustees of Rush Medical College. The amount is to be added to the Thomson - Bevan Surgical Fellowship Fund, established in 1914 by gifts of Mr. A. D. Thomson and Dr. Bevan. The annual income from the fund provides a fellowship for a resident surgeon or head surgeon at Presbyterian Hospital. On the death of the primary beneficiaries of the will, \$25,000 will go to the Lake Forest Hospital, Lake Forest, Ill., as a surgical endowment and the residue will

go to the Presbyterian Hospital to establish a perpetual endowment.

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Winthrop Chemical Company

Dr. Maurice L. Tainter, since 1935 professor of pharmacology at Stanford University School of Medicine and since 1934 professor of pharmacology and head of the division of physiologic sciences, College of Physicians and Surgeons, School of Dentistry, San Francisco, has been named research director of the Winthrop Chemical Company, Inc. Dr. Tainter will make his headquarters at the company's plant and laboratories in Rennselaer, N. Y.

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Army and Navy "E" to W. A. Baum Co., Inc.

The W. A. Baum Co., Inc., has been awarded the Army-Navy "E" award for outstanding production achievement of war supplies. Baum manufactures the Lifetime Baumanometer, a well known apparatus used by physicians for many years.

Book News

Roentgenographic Technique: A Manual for Physicians, Students and Technicians

By Darmon A. Rhinehart, M.D., Professor of Roentgenology and Applied Anatomy, University of Arkansas School of Medicine. Ed. 3. Lea & Febiger, Philadelphia. 1943. Price, \$5.50.

The general plan of the book remains unchanged. The technical procedures are based on the thickness and roentgenographic density of parts of the human body. Emphasis has been placed on the method of developing a technique by experimental exposures and by charting the results of actual diagnostic exposures. In such ways a technique can be developed in the laboratory with the equipment with which it is to be used. This work presents a standard procedure which is thoroughly practical, successful and modern. The positioning and the special procedures to be applied to each part of the body are clearly presented. The work is complete, fundamental, logical and simple. Its descriptions are lucid and the illustrations are unusually clear owing to the high grade of coated paper used throughout.

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Rehabilitation of the War Injured: A Symposium

Edited by William B. Dougherty, M.D., and Dagobert D. Runes, Ph.D., Philosophical Library, New York. 1943.

A collection of about fifty papers by as many authors dealing with war injuries and their treatment. These papers are arranged under a number of special heads, such as: Neurology and psychiatry; reconstructive and plastic surgery; orthopedics; physiotherapy; occupational therapy and vocational guidance; legal aspects of rehabilitation; miscellaneous.

* *

Allergy

Erich Urbach, M.D., Chief of Allergy Service, with the collaboration of Philip M. Gottlieb, M.D., Associate on Allergy Service, Jewish Hospital, Philadelphia. Grune & Stratton, New York. 1943. Price, \$12.

An exhaustive discussion of every phase of allergy for the internist, the pediatrician, the surgeon, the gynecologist, the neurologist, the dermatologist, the otolaryngologist and the industrial hygienist; well illustrated and giving 2,300 references from the literature. An excellent book for the practitioner but too much for the medical student.

Clinical Parasitology

By Charles F. Craig, M.D., Emeritus Professor of Tropical Medicine, and Ernest C. Faust, Ph.D., Professor of Parasitology in the Department of Tropical Medicine, Tulane University of Louisiana School of Medicine. Ed. 3. Lea & Febiger, Philadelphia. 1943. Price, \$9.

Parasitology has come to occupy an important position at this time and will, no doubt, increase in importance as time passes. The authors of this book are past masters in this field, therefore, their work should make a strong appeal to students as well as practitioners.

In its present form the work presents concisely the essential facts concerning those parasites which provide such serious clinical and public health problems. The symptoms caused by their presence and the important methods of diagnosis, treatment and control are clearly described. An appendix offers the various technics for collection, preparation and identification. The bibliography is unusually extensive and there is an index of authors as well as of subjects.

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The Boy Sex Offender and His Later Career

By Lewis J. Doshay, M.D., Psychiatrist, Children's Courts, New York City. Foreword by George W. Henry, M.D., Associate Professor of Clinical Psychiatry, Cornell University Medical College. Grune & Stratton, New York. 1943. Price, \$3.50.

The book describes results obtained by constructive guidance of spontaneous psychologic processes, under scientific technics of social therapy, such as those of children's court clinics. Further development of such work, correlated with parental, school, and community hygienic effort, offers, according to the author's conclusions, the fundamental means for treatment and prevention of boyhood sex delinquency.

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The Principles and Practice of Industrial Medicine

Edited by Fred J. Wampler, M.D., Professor of Preventive and Industrial Medicine, Medical College of Virginia. The Williams & Wilkins Company, Baltimore. 1943. Price, \$6.

The timely work is the result of the coordinated effort of a group of 32 experts from every field of industrial medicine. They present today's concepts of the relationship of

environment to physical well-being of the worker and show how to apply such knowledge in practice. The book therefore serves the dual purpose of advising practicing physicians (especially those who without much preparation are being asked to take on the medical care of workers) and of instructing medical students so that they will know how to step in and do a real job of health protection in industry.

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*An Atlas of Anatomy:
In Two Volumes*

Volume I.—By J. C. Boileau Grant, Professor of Anatomy, University of Toronto. Volume II.—Upper Limb; Abdomen; Perineum; Pelvis and Lower Limb. The Williams & Wilkins Company, Baltimore. 1943. Price, \$5.

This atlas is of great value to students. The regional presentation reflects the method of dissection followed in medical schools but also makes it useful in clinical work. Everything about a region is shown. It is based on actual dissections. Color plates predominate. Clear labeling leaves no doubt as to what is shown. Accompanying short demonstrations emphasize points of significance. An index leads quickly to the plates in which any structure is shown. A splendid piece of work by a master of the subject. The illustrations are excellent.

* *

A Synopsis of Clinical Syphilis

By James K. Howles, M.D., Professor of Dermatology and Syphilology, Louisiana State University School of Medicine. The C. V. Mosby Company, St. Louis. 1943. Price, \$6.

Well written; good arrangement; splendid presentation of the subject for the medical student, with many fine carefully selected illustrations. The text is arranged in three sections: I.—General considerations of syphilis; II.—Systemic and regional syphilis; III.—The familial and public health aspects of syphilis. An appendix presents a historical note. References are placed at the end of the book. (Is it necessary to give the student so many references? May it not be presumed that the author is familiar with the literature on his subject? The text proves that he is.) Special praise for the fine index.

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Pye's Surgical Handicraft

Edited by Hamilton Bailey, F.R.C.S., London. Ed. 13. The Williams & Wilkins Company, Baltimore. 1942. Price, \$6.

This book made its initial appearance fifty-eight years ago, then, as now, "a manual of surgical manipulations, minor surgery and other matters connected with the work

of surgical dressers, house surgeons and practitioners." The present editor is responsible for the last three editions. Walter Pye was responsible for the first three editions. The text is divided into seventy-five chapters and a magnificent index. Forty contributors are the authors, each one an authority in his field. More than five hundred good illustrations add considerably to the value of the text, which is concise, clear and to the point. Medical students will find this book a valuable and useful addition to their everyday working library. There is so much in it that they should know.

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*An Introduction to Sociology and
Social Problems:*

A Textbook for Nurses

By Deborah MacLurg Jensen, R.N., Lecturer in Nursing Education, Washington University, St. Louis. Ed. 2. The C. V. Mosby Company, St. Louis. 1943. Price, \$3.25.

Self Teaching Tests in Arithmetic

By Ruth W. Jessee, R.N., Instructor in Science, Bridgeport Hospital, Connecticut. The C. V. Mosby Company, St. Louis. 1943. Price, \$1.50.

These two books are for nurses who will, no doubt, find them very valuable in their education and activity.

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Applied Anatomy of the Head and Neck

By Harry H. Shapiro, D.M.D., Assistant Professor of Anatomy, Columbia University College of Physicians and Surgeons. J. B. Lippincott Company, Philadelphia. 1943. Price, \$5.50.

This book is specifically designed to relate the anatomy of the head and neck to various fields of dentistry. For that purpose, it appears to be excellent. It is well illustrated; many of the illustrations being originals.

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Methods of Treatment

By Logan Clendening, M.D., Clinical Professor of Medicine, and Edward H. Hashinger, M.D., Clinical Professor of Medicine, University of Kansas School of Medicine. With chapters on special subjects by contributing authors. Ed. 8. The C. V. Mosby Company, St. Louis. 1943. Price, \$10.

The twelfth revision of the U. S. Pharmacopoeia and the seventh edition of the National Formulary were used in the preparation of this edition. A very useful book to have on hand. Gives authoritative information in easily readable form, which every practitioner will appreciate.

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Handbook of Tropical Medicine

By Alfred C. Reed, M.D., Associate Clinical Professor of Medicine, Stanford University School of Medicine, and J. C. Geiger, M.D., Director of Public Health, San Francisco, California. Stanford University Press, Stanford University, California. 1943. Price, \$1.50.

Tropical medicine is important today and for the coming years, both for military establishments and for civilian populations. All physicians must be prepared to deal with these diseases fostered by or occurring in warm climates. This manual will help in the emergency due to conditions brought on by the war throughout the world.

* *

Kaiser Wakes the Doctors

By Paul De Kruif. Harcourt, Brace and Company, New York. 1943. Price, \$2.

The story of Henry J. Kaiser's plan for giving medical care to his employees. "The Kaiser plan is the opening gun of the medical battle on the home front."

*Air-Borne Infection:**Some Observations on Its Decline*

By Dwight O'Hara, M.D., Professor of Preventive Medicine, Tufts College Medical School. The Commonwealth Fund, New York. 1943. Price, \$1.50.

Presents data on the prevention of smallpox and diphtheria and on the decreasing seriousness of common colds, pneumonia, streptococcus infections, tuberculosis, and other air-borne infections. In this challenging group of essays the author considers what has happened, how it has happened, and what significance it may have. What he says is of concern to every physician and health officer, and he says it interestingly.

CLINICAL PARASITOLOGY

By CHARLES FRANKLIN CRAIG
M.D., F.A.C.S., F.A.C.P., Col. U. S.
Army (Retired), D.S.M.

Emeritus Professor of Tropical Medicine

and ERNEST CARROLL FAUST,
M.A., Ph.D.

Professor of Parasitology
The Tulane University of Louisiana
New Orleans, Louisiana

Third edition. Octavo, 767 pages, illustrated with 294 engravings and 4 colored plates. Buckram, \$9.00, net.

Radical changes have been made to bring every section of the volume up to date. This work presents concisely the essential facts concerning those parasites which provide such serious clinical and public health problems.

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